

CA-IR-620

Ref: HECO response to CA-IR-57 (T&D Cable Projects and Programs).

The referenced response describes two projects (P0000917, Village Park & P0001016, Lurline Mariposa) and two programs (P1810000, Preventive Cable Replacement & P0000122, Corrective Cable Replacement) regarding buried cable. Please provide the following:

- a. Referring to CA-IR-57, Attachment A, please explain when HECO initiated and the expected term of each identified project/ program.
- b. With regard to the "feasibility" studies referenced in CA-IR-57, were any cost/ benefit studies or other economic/ financial analyses prepared that included estimates of the cost and expected benefits of these projects/ programs?
 1. If so, please provide a copy of each such study/ analysis.
 2. If not, please explain why such analyses were either not undertaken or otherwise were considered unnecessary.
- c. Please describe the presentation and approval process followed for each of these projects/ programs.
- d. Please provide the approved expenditure forecast by year for each identified project/ program (specifically identifying amounts included in the 2005 test year forecast), also showing the annual distribution between expense and capital accounts.
- e. Does HECO anticipate that the identified projects/programs will result in reduced maintenance costs, as compared to costs previously incurred for corrective and maintenance efforts associated with cable failures and faults? Please explain.
- f. Referring to the responses to items (d) and (e) above, does the 2005 test year forecast recognize any reduction in maintenance costs, as compared to 2003 levels, expected to result from these projects/ programs?

1. If so, please quantify that reduction.

2. If not, please explain why such reductions have not been reflected in the 2005 test year

respectively. The current schedule is to complete Village Park by September 2005 and Lurline Mariposa by December 2005. The Corrective Miscellaneous Cable Failures and Preventive Miscellaneous Cable Failures programs were estimated on an annual basis. Please refer to HECO's response to CA-IR-64, Attachment A, page 4, filed with the Consumer Advocate and the Department of Defense on April 27, 2005, for actual costs from 2000 to 2004 and the 2005 test year budget.

- b. No other cost/benefit studies or economic/financial analyses were prepared to estimate

benefits. Cables in the area are aging and deteriorating to a point where maintenance and

for a larger number of cable failures to occur, which may require increased corrective and maintenance efforts. Nevertheless, we have lowered our 2005 O&M budget to take into account some benefit from these projects and programs. Please refer to HECO's response to CA-IR-622 for more information on this topic.

- e. O&M maintenance costs for cable failures are primarily budgeted in our Corrective Maintenance program (P0000359). Please refer to Attachment A, page 4 of HECO's response to CA-IR-64 for actual costs from 2000 to 2004 and 2005 test year budget. As shown, the 2005 test year budget is lower than the 2003 actual costs by \$127,239. As noted in HECO's response to CA-IR-622, we did not do any formal analysis to determine the benefits, but it was based on our Staff's knowledge of the situation.

CA-IR-621

Ref: HECO response to CA-IR-69 (T&D Tree Trimming).

Please provide a breakdown of the annual amounts between outside contractors, HECO labor costs and HECO nonlabor costs.

HECO Response:

See table below for the breakdown of the annual amounts for:

NARUC Description	2000 Actual	2001 Actual	2002 Actual	2003 Actual	2004 Actual	2005 Test Year Forecast
Outside Contractors	2,103,235	1,839,800	1,739,059	2,142,713	2,000,395	1,865,008
HECO Labor	151,628	198,837	108,453	253,594	298,054	360,861
HECO Nonlabor	18,875	96	778	3,439	1,234	0
	2,273,738	2,038,733	1,848,290	2,399,746	2,299,683	2,225,869

CA-IR-622

Ref: HECO response to CA-IR-199 (Waikiki Rehabilitation Program).

The referenced response indicates that the 2005 budget does not reflect any reduced cable failures related to this project, as the HPUC has not yet issued a D&O approving the project, even though the project is assumed to be completed in June 2005. If the Waikiki Rehabilitation project is forecasted for completion in the 2005 test year and included in rate base, please explain why it would be inappropriate to similarly recognize the benefits (i.e., reduced maintenance costs) expected to result from that same project in the 2005 test year forecast.

HECO Response:

The costs for Waikiki Rehabilitation Project I have been excluded from the updated 2005 plant addition estimate as provided in HECO's May 5, 2005 transmittal of its TY 2005 updates to the Consumer Advocate ("CA"), the Department of Defense ("DOD") and the Commission. Please also refer to HECO's response to CA-IR-626.

With regards to recognizing the benefits of this project (i.e., reduced maintenance costs), the following is to clarify HECO's response to CA-IR-199 (filed with the CA on March 2, 2005 and a copy provided to the DOD on March 16, 2005). The O&M budget for cable maintenance is not based on a specific estimate of the number of expected cable failures in any given year or expected reduction due to the benefits of specific projects. As our system ages we expect cable

failures to increase. We also expect that the benefits of plant replacement projects such as the Waikiki Rehabilitation Project as well as the Direct Buried Cable Replacement Projects and Programs (refer to HECO's response to CA-IR-57 which was filed with the CA and the DOD on April 15, 2005) will be realized. It is difficult to accurately quantify cable failures expected as well as cable failures avoided. Over time, budgeting cable maintenance costs based on historical trends should take into account the current rate of cable failures due to aging as well as project/program benefits. As noted in HECO T-8, Page 11 of 22, lines 3-6, the level of O&M

work is based on a combination of factors. The 2005 cable maintenance budget was based on a review of historical costs, and adjusted based on input from staff members who have specific knowledge of the cable systems. Please refer to HECO's response to CA-IR-64, Attachment A, program no. P0000359 Corrective Maintenance (filed with the CA and the DOD on April 27, 2005). This is the primary program where maintenance costs to respond to cable failures were budgeted. As shown on Attachment A, page 4, a lower amount than any previous year was forecasted for the TY 2005 budget. While history indicates that a higher amount could have been budgeted, the Staff's judgment was that we should begin to see a benefit from our plant replacement efforts. Please note that no formal analysis was performed to determine the benefits. These efforts include the Waikiki Rehabilitation Project as well as the Direct Buried Cable Replacement Projects and Programs referred to in HECO's response to CA-IR-57. Referring to HECO's response to CA-IR-64, Attachment A, page 4, for program no. P0000122, Corrective Miscellaneous Cable Replacement, HECO's capital costs exceeded its 2004 budget to install new cables to address cable failures. To summarize, HECO did not forecast a specific reduction in cable failures due to the Waikiki Rehabilitation Project or any other individual project or program, but did forecast a lower of expenses for cable failures based on its overall plant replacement efforts, which included completion of the Waikiki project.

CA-IR-623

Ref: HECO response to CA-IR-77 (Customer Records & Collections).

CA-IR-77 sought the identification of the specific “initiatives, projects, additional work or other items” not undertaken in 2003 because of inadequate staffing. The response to CA-IR-77(a) provides a general discussion of areas that would have been addressed with additional staffing. CA-IR-77(b) sought the identification of any initiative or projects deferred from 2003 to 2005, along with the related amounts included in the 2005 test year. No quantifications were provided. Please provide the following:

- a. Is the 2005 test year forecast higher as a result of work not having been done in 2003 that was instead deferred to 2005?
 1. If so, please so state.
 2. If not, please explain the basis for the response.
- b. Referring to item (a) above, please identify the specific work or undertakings deferred from 2003 to 2005.
- c. Referring to items (a) and (b) above, please provide a quantification of the added costs included in the 2005 test that would have been avoided, if the work could have been done in 2003.

HECO Response:

- a.
 1. Yes. The 2005 test year forecast is higher as a result of work not having been done in 2003 that was instead deferred to 2005. Please refer to CA-IR-77 (b). “The process improvement initiatives are largely based on having sufficient staffing to meet these initiatives. The required staffing levels to meet these process improvement initiatives are included in the 2005 test year.”
- b. The specific work or undertakings deferred from 2003 to 2005, as stated in CA-IR-77 (a). “The following shows the areas that would have been addressed with additional staffing. They include, training, cross training, succession planning, ensuring there are no skill shortages in meeting future Operations needs and process improvement initiatives. These process improvement initiatives are comprised of statistical analyses, reduce meter reading

errors. reduce delayed billings. reduce calls to call center. reduce high bill inquiries and

reduce escalated customer complaints to executives and the Public Utilities Commission.”

- c. Although 2005 is higher because of the need for sufficient staffing levels, this is not a case of work being deferred from 2003 to 2005, so that if the work had been done in 2003 it would not have to be done in 2005. It is a case of the process improvement initiatives commencing when we have the staff to carry them out, and to continue with them in succeeding years. Thus, the 2005 test year represents the level required going forward on an annual basis to develop and maintain the undertakings listed in (b.) above.

CA-IR-624

Ref: Response to CA-IR-390 regarding the Ford Island Substation.

Please provide the following in this regard:

- a. Any correspondence with the military/federal government discussing the construction delays, revised construction schedules, expected load additions and/or revisions to expected load additions – including the revised timing associated with each load expected.
- b. Discuss specifically what actions and activities have been, are being, or will be occurring in

CA-IR-625

Ref: Response to CA-IR-204 regarding the acquisition of the new phone system.

Please provide the following in this regard:

- a. A detailed listing, as well as associated annual costs of phone system trunks, maintenance and data circuits prior to the acquisition and implementation of the new phone system and a detailed listing as well as associated annual costs of phone system trunks, maintenance and data circuits expected after the new phone system is fully installed.
- b. Underlying support for the expected net increase of \$403,000 in the 2005 operating budget for the new phone system trunks, maintenance and data circuits.

HECO Response:

- a. See table on page 3.

Notes:

- Column 1 – **Annual Budget Prior to Implementation** reflects old phone system and Local Area Network costs.
- Column 2 – **Incremental 2005 Budget** reflects additions related to the new phone system in 2005.
- Column 3 – **2005 Budget: During Implementation** reflects costs of old and new phone systems. Costs of both old phone system and new phone system are reflected as both systems are in operation during the 2005 implementation year. See response to CA-IR-2, HECO T-13, Attachment 10, page 17.
- Column 4 – **Annual Budget: Fully Installed** reflects current cost estimates for the new phone system after the old system is phased out. Cost estimates here are based on more current information than used for the 2005 Budget (Column 3) estimates which were cast over a year ago. Further explanations of column 4 components follow:
 - Phone System Trunks reflects a reduction in phone system trunks; some trunks will

remain as backup circuits.

- Network Data Circuits consists of PRI ISDN lines and NLAN high speed circuits to support our voice and data network.

- Maintenance – Network Equipment reflects maintenance costs for network routers and switches.

- Maintenance - New Phone System reflects maintenance costs for the new Avaya phone system and related services.

- Maintenance - Old Phone System reflects the discontinuation of maintenance on the old phone system.

b. See Column 2 in table on page 3. These new phone system and network upgrade estimates

Exhibit 1 to April 2004

	Column 1	Column 2	Column 3	Column 4			
	Annual Budget Prior to Implementation	Incremental 2005 Budget	2005 Budget: During Implementation	Vendor	Quantity	Description	Annual Budget: Fully Installed
Phone System Trunks	178,800		178,800	Verizon	70	Analog Trunks	51,000
Network Data Circuits	55,000	95,000	150,000	Time Warner	8	PRI ISDN lines	66,000
						NLAN High Speed Circuits: HPP to	
				Time Warner	3	Kahe, HPP to CPP, Ward to Koolau	206,000
Maintenance – Network Equipment (LAN)	175,000	75,000	250,000	CISCO Systems	12	CISCO Smartnet 8x5xNBD, 24x7	19,000
				AT&T	206	CISCO Smartnet 8x5xNBD, 24x7	186,000
Maintenance - New Phone System	0	233,000		Progressive Communications		Avaya PBX, Metropolis Office Watch, NICE Call Recording, Avaya Call Management, Unified Messaging, Avaya Audio Teleconferencing, Avaya IVR	190,000
Maintenance - Old Phone System	116,713	0	116,713				0
TOTAL	525,513	403,000	928,513				718,000

Note: The amounts in Columns 1 through 4 provided above are charged to clearing accounts. The O&M impact after clearing is 92%.

CA-IR-626

Ref: HECO response to CA-IR-199 & HECO-1803 (Waikiki Rehabilitation Program).

The referenced response indicates that the 2005 budget does not reflect any reduction in cable

failures expected to result from this project, as the HPUC has not yet issued a D&O approving the project, even though the project is assumed to be completed in June 2005 and included in rate base. Please provide the following:

- a. What is the expected term for this construction project?
- b. Does HECO still anticipate receiving HPUC approval in Docket No. 01-0228 in the near future, such that the project can still be completed in 2005? Please explain.
- c. To the extent that the timing of HPUC approval in Docket No. 01-0228 and completion of the project in 2005 are uncertain, does the Company believe that the investment in the Waikiki Rehabilitation capital project should be removed from rate base, particularly since any related benefits (i.e., reduced maintenance costs) have not been recognized in the 2005 test year forecast? Please explain.
- d. If the cost of the Waikiki Rehabilitation capital project remains in rate base, would it be appropriate and consistent to recognize any related benefits (i.e., reduced maintenance costs) in the 2005 test year forecast? Please explain

HECO Response:

- a. Construction on this project is expected to take 16 months.
- b. Even if HECO receives HPUC approval in the near future, this project cannot be completed in 2005 because of the 16 month construction schedule.
- c. Yes. The costs for Waikiki Rehabilitation Project 1 have been excluded from the updated 2005 plant addition estimate (and therefore excluded from the rate base) that was provided in the May 5, 2005 transmittal to the Consumer Advocate, the Department of Defense and the Commission. For information on the related benefits (i.e., reduced maintenance costs) of this and other projects, please refer to HECO's response to CA-IR-622.
- d. Not applicable, see response to sub-part c.

CA-IR-627

Ref: HECO responses to CA-IR-2 & CA-IR-239 (Non-ITS PMs).

CA-IR-239(c) discusses "Expense Element 451 Charges by non-ITS PMs," refers to HECO T-13, CA-IR-2, Attachment 10, Page 26, and provides a multi-year comparison of charges to this expense element on page 3 of the response to CA-IR-239. Please provide the following:

- a. Please explain and describe the reference to "non-ITS PMs."
- b. For calendar years 2002 through 2004, please provide a breakdown for the "non-ITS PMs" similar to HECO T-13, CA-IR-2, Attachment 10, Page 26.
- c. Referring to HECO T-13, CA-IR-2, Attachment 10, Page 26, please describe the project (i.e., purpose, current status, start date, completion date, replacement for other projects/ efforts, etc.) identified as "PLC Market Trial."
- d. Referring to HECO T-13, CA-IR-2, Attachment 10, Page 26, please describe the project (i.e., purpose, current status, start date, completion date, replacement for other projects/ efforts, etc.) identified as "CIS Replacement."

HECO Response:

- a. "Non-ITS PMs" refer to HECO projects requiring ITS resource support which are not headed by IT Project Managers. These projects get charged for ITS labor through the ITS costing system via Expense Element 451 charges (EE 451 = Information System Expense-Production & Development).
- b. Breakdown of Charges by "non-ITS PMs" follows:

Project Name	Project Number	2002	2003	2004
DSM CIEE	P0000021	\$29,265	-	\$25,089
DSM CINC	P0000022	23,246	-	7,031
DSM CICR	P0000023	25,252	-	11,664
DSM REWH	P0000024	30,268	-	23,647
DSM RNC	P0000025	23,246	-	8,626

Core Marketing Pgms	P0000032	-	1,383	2,529
Innovative Rate Dev	P0000035	9,440	-	-
Project Ellipse	P0000318	39,166	317,478	-
CIS Replacement	P0000571	-	14,756	-
Middleware Implement	P0000868	-	-	25,331
HR/Benefits/Comp Suite	P0001010	-	-	17,685
Total		\$179,883	\$333,617	\$121,602

- c. PLC (Power Line Communications) Market Trial, otherwise known as Broadband Over Powerline (BPL), is a technology where telecommunications signals are transmitted over electric lines. BPL costs have been excluded from the 2005 Rate Case.
- d. The CIS Replacement Project (P0000571) involves the purchase and installation of a new, commercially available, customer information system ("CIS"), to meet specific requirements of Hawaiian Electric Company, Inc. Hawaii Electric Light Company, Inc. and Maui Electric Company Limited ("Companies"). The new CIS will replace the existing CIS, called the Automated Corporate Customer Energy Services System ("ACCESS"), which was designed in the 1980's using technology originally dating back to the 1960's and implemented in 1991. The existing CIS was designed as a basic billing and meter data information system. While still operational, the existing CIS is outdated, many of its components (e.g., database structure, programming environments, operating systems, system hardware) are increasingly difficult and costly to maintain, and the system cannot meet either current or future business needs.

The costs included in the rate case assume a January 2005 project start. The estimated completion date for the Project is 24 months from the Project start date. The Project will be

led by a non-ITS Project Manager from HECO. ITS support (EE #451) will be provided by programmers/analysts and an IT Project Manager to manage internal ITS resources for the Project. ITS estimated costs have been expensed or deferred consistent with Statement of Position (SOP) 98-1, Accounting for the Costs of Computer Software Developed or Obtained for Internal Use, issued in March 1998, and allocated to the three Companies based on December 2003 customer counts.

Project Status: The PUC application was filed in August 2004 and amended in December 2004. On April 13, 2005, the parties (i.e., the Companies and the CA) filed a joint letter in lieu of the Companies submitting a reply to the CA's March 24, 2005 statement of position. The parties' joint letter (1) represented a negotiated compromise of all the issues and concerns, and was intended to replace and supersede the CA's recommendations set forth in its statement of position, and (2) included agreements on certain conditions to address concerns raised in the CA's statement of position. By Decision and Order No. 21798 issued May 3, 2005, the PUC approved the application, subject to the stipulated conditions.

CA-IR-628

Ref: HECO response to CA-IR-238 (Other ITS Costs).

CA-IR-238(d) discusses variances in "Other" ITS costs between 2003, 2004 and 2005 forecast. Please provide the following:

- a. Please provide a detailed breakdown of the annual "Other" amounts set forth on page 3 of CA-IR-238, specifically listing the following categories: phone system maintenance, network circuits lease, software (McAfee and Change Management) and consulting charges.

b. ~~Provide to item (a) above unless detailed explanation is provided.~~

570/900 - Rents				
- Data Center (895)	-	182.320	252.237	-

		higher.
515/516- Company/Employee Memberships	3,200	Annual recurring
520/521/522- Travel Expenses	19,800	Annual recurring
570/900 – Rents		
- Infrastructure LAN (896) – Network Circuit Lease	150,000	Annual recurring (refer to the response to CA-IR-625 column 3 Network Data Circuits for updated estimates)
- PABX Trunk/LD/Infrastructure Comm Charges (900)	178,800	Annual recurring (refer to the response to CA-IR-625 column 3 Phone System Trunks for updated estimates)
- Telecom Equipment (915) - phone system maintenance	349,713	Annual Recurring (refer to the response to CA-IR-625 column 3 Maintenance - New Phone System, and Maintenance - Old Phone System Maintenance for updated estimates)
Total	\$1,181,513	

CA-IR-629

Ref: Response to CA-IR-383 regarding the permanent book/tax difference entitled "Flex Dividend Deduction:"

Please provide the following in this regard:

- a. Please confirm, or explain to the contrary as applicable, that the 401k plan referenced within the noted response refers to 401k plans for HEI-direct employees *as well as* all the various HEI subsidiaries including HECO.
 - b. State the number of years the noted 401k plan has been in effect, as well as the number of years the Flex Dividend Deduction has been available to HEI (to the extent it may be different than the number of years that the 401k plan has been in effect).
 - c. Please specifically state whether the referenced 401k plan(s) include any 401k plans applicable to HECO employees, and further, whether and to what extent such HECO 401k plan provides for Company matching provisions related to the employee's contribution that are included as a cost of service expense component in the instant application.
 - d. Provide 2003 and 2004 deductible HEI dividends paid to the 401k plans held/owned by
-

employees of each individual HEI subsidiary. In other words, please provide the deductible dividends paid to the 401 k participants of HECO, MECO, HELCO, etc.

HECO Response:

- a. Yes, the 401k plan participants are employees of HEI as well as the various HEI subsidiaries participating in the 401k plan, including HECO.
- b. The 401k plan was implemented in 1984. The Employee Stock Ownership Plan (ESOP) feature that allows for the flex dividend deduction was implemented in 2002.
- c. See response to a above. The referenced 401k plan does not have a Company matching feature.
- d. Dividends paid are not readily available or tracked by the Company of employment. Note that the participants, not the companies, are investing funds in investments of their individual choice. The accounts are held in trust for the individual employees. The Company sponsors the plan and facilitates the investment, but the accounts are the

individual participants' accounts. Each participant decides independently whether to invest in the HEI Common Stock Fund.

The HEI Common Stock Fund is an investment choice among several offered by Fidelity. The tax law allows a deduction for dividends paid by HEI to the 401k plan's HEI Common Stock Fund. HEI, not the subsidiaries, should be entitled to the tax deduction and the benefit derived.

CA-IR-630

Ref: HECO T-1, page 19.

According to Mr. Alm's testimony, "HECO deliberately reduced spending, while not compromising reliability, during that period." Please respond to the following:

- a. Describe the process through which HECO evaluated expenditure levels to identify places where spending could be "deliberately reduced", as discussed by Mr. Alm.
- b. Provide complete copies of all budgeting guidelines, internal correspondence, memoranda, budget adjustment proposals, budget recycles, and other documents used to plan for and effect the "deliberately reduced spending" in each year.
- c. Provide all available information reflective of the spending reductions that were actually implemented in each department as part of the "deliberately reduced spending" that occurred in each year.
- d. What approximate total amount of avoided expense is thought to have been accomplished in each year as a result of the described expenditure reduction efforts?
- e. To the extent possible, provide a breakdown of the response to part (d) by NARUC block of accounts (production, transmission, distribution, customer accounting, customer services,

A&G) for each applicable year.

- f. What approximate total amount of avoided capital expenditures is thought to have been accomplished in each year as a result of the described expenditure reduction efforts?
- g. To the extent possible, provide a breakdown of the response to part (f) by NARUC block of accounts (production, transmission, distribution, general plant) for each applicable year.
- h. Were any reports prepared for senior management or the Board of Directors to explain and quantify the cost reduction programs that were planned and implemented?
- i. Provide complete copies of all available documents associated with your responses to parts (c) through (h) of this information request.

HECO Response:

- a. Please see the response to CA-IR-269.
- b. HECO objects to the request that it provide "complete copies of all budgeting guidelines, internal correspondence, memoranda, budget adjustment proposals, budget recycles, and other documents used to plan for and effect the 'deliberately reduced spending' in each

year” as such a request is overly broad and unduly burdensome. Without waiving any objections, please see the response to CA-IR-8, CA-IR-12, CA-IR-269.

- c. The Company did not track the spending reductions that were actually implemented in each department as part of the “deliberately reduced spending” that occurred in each year.

However, HECO has provided a significant amount of information concerning its efforts to reduce the level of spending (including staffing levels) in its testimonies (e.g., O&M witnesses) and in responses to specific IRs. For example, such subjects are discussed in the responses to CA-IR-20, IR-21, and IR-269 and the responses referenced therein.

- d. HECO did not track the “total amount of avoided expense . . . accomplished in each year as a result of the described expenditure reduction efforts”. As a result HECO is unable to provide the requested information. Please see the response to subpart c. above.

- e. Please see the response to subpart d. above.

- f. HECO did not track the “total amount of avoided capital expenditures . . . as a result of the described expenditure reduction efforts”. As a result, HECO is unable to provide the requested information

- g. Please see response to subpart f above.

- h. There were no “reports prepared for senior management or the Board of Directors to explain and quantify the cost reduction programs that were planned and implemented”. Potential reductions and other actions being contemplated by management to deliberately reduce spending, while not compromising safety and reliability, in light of the impact of the war in Iraq, 9/11, and the continuing sluggish economy were presented to senior management and the Board of Directors which was accompanied by a Powerpoint presentation.

- i. Without waiving the objections below, please see the responses to subparts c. through h.

above. In addition, HECO has provided a significant amount of information concerning its efforts to reduce the level of spending (including staffing levels) in its testimonies (e.g.,

O&M witnesses) and in responses to specific IRs. For example, please see the responses to CA-IR-20, -21, and -269 and the other IR responses referenced therein. HECO objects to providing copies of "all available documents associated with" certain subparts of this IR as a request for "all" such documents is overly broad and unduly burdensome and such request is vague and ambiguous to the extent the request asked for documents "associated" with certain subparts without specifying what is meant by the word "associated" in the context of the request.

In addition, HECO objects to providing the presentation referenced in subpart h above as the provision of such information would require that explanations of the matters being addressed be developed which would be unduly burdensome. The explanations of the matters covered were intentionally brief in nature since the audience understood the context of the subject matter and HECO believes that it is not cost effective to spend the time to generate elaborate explanations. If HECO is required to produce such internally generated documents at the time of rate cases, then the information will have to be generated in a fashion suitable for external publication, rather than in its present form used for internal management purposes. This would be unduly burdensome as well as counterproductive. The presentation referenced in subpart h was intended solely to be a management tool, and is not required to be presented in a form to be transmitted outside the Company. Were such materials subject to review in a regulatory proceeding, their candid nature and, therefore, their value would diminish significantly in the future, and HECO's internal communications

would be seriously hampered. As set forth in the objection to CA-IR-242, the CA's request fails to balance the CA's need for this information against HECO's need to manage.

HECO also objects to disclosure of such information even under a protective order. The value of the internal documents will be diminished for the reasons stated above if HECO is required to provide the documents to the CA, even if the documents are provided pursuant to a protective order.

CA-IR-631

**Ref: HECO-608, HECO-609 and HECO Responses to CA-IR-173 and CA-IR-178
Production Staffing.**

According to the response, there is a "...higher volume of maintenance required as a result of operating the units longer and harder." Please provide the following information:

- a. Explain why the increased cycling unit service hours, as shown on HECO-609 for the years 2000 through 2004, have not produced any corresponding increase in production O&M labor hours for either Steam Operation or for Steam Maintenance expense accounts in those same years (see CA-IR-178 at page 2).
- b. Explain why the increased peaking unit service hours, as shown on HECO-608 for the years 2000 through 2004, have not produced any corresponding increase in O&M labor hours for either Other Operation or for Other Maintenance expense accounts in those same years (see CA-IR-178 at page 2).
- c. Provide all studies, reports, analyses, workpapers and other information relied upon in concluding that a higher volume of maintenance is required as a result of operating the units longer and harder.

HECO Response:

- a. Referring to CA-IR-170, page 4, Other Operations and Maintenance actual expenses show an increasing trend that includes all generating units. As discussed in HECO T-6, all generating units, base load, cycling and peaking units, are impacted by the significant

beyond the 16x5 staffing level, thus requiring operators to work longer hours and on weekends to extend unit operation and availability beyond 16x5. The trends in HECO-620 are not as pronounced as Honolulu because Waipua operates six (6) steam units and two

combustion turbines, and all units are staffed for 24x7 except Waiau 3&4. As discussed in HECO T-6, significantly higher demand in just the last two years, reduced reserve margins, and other factors discussed at length, are requiring 24x7 availability of all generating units.

Maintenance labor hours are also primarily impacted by staffing level and overtime. HECO Maintenance labor hours alone, even with higher overtime trends in HECO-625, do not provide an accurate assessment of the factors impacting aging cycling unit maintenance discussed at length in HECO T-6. Referring to CA-IR-170, page 4, Other Production

units. Operations labor to operate the two Waiau combustion turbines, Waiau Unit 9 and Waiau Unit 10, are already factored into the existing 24x7 coverage for Waiau 7&8 since both units can be operated remotely from the Waiau 7&8 control room. As mentioned above, the additional Waiau Operations staffing increase only applies to Waiau Units 3&4.

Maintenance expense on the combustion turbines is expected to increase with the significant increase in service hours. HECO-608 shows a significant increase in combustion turbine operation in just two years, from 2003, and is expected to continue until more capacity can be added to lower CT service hours back into the peaking range of about 500 hours per year. Referring to HECO-601, Waiau 9 and Waiau 10 will be 32 years old in 2005. See also response to CA-IR-45.

- c. Available information was already provided in HECO T-6 and associated exhibits, and through CA-IR responses.

CA-IR-632

Ref: HECO Responses to CA-IR-170, page 4, Production O&M trends.

The largest year-over-year changes in actual historical production O&M expense levels do not seem to be correlated to the periods of “rapidly growing demand,” but instead to other periods and events. Please provide the following information:

- a. Please explain all known causes for the \$4.5 million increase in “Operation” expenses in the year 2000, relative to 1999.
- b. Please explain specific outage circumstances and costs and all other known causes for the \$3.7 million decrease in “Maintenance” expenses in the year 1998, relative to 1997.
- c. Please explain specific outage events and costs and all other known causes for the \$6.6 million increase in “Maintenance” expenses in the year 2000, relative to 1999.
- d. Please explain specific outage events and costs and all other known causes for the \$5.3 million increase in “Maintenance” expenses in the year 2004, relative to 2003.
- e. Provide copies of any available budget variance reports or other contemporaneous documentation prepared in connection with or to explain the matters described in your responses to parts (a) through (d), above.

HECO Response:

Refer to the below pages for explanation and supports. Note that transaction detail reports

(DARS 1652 Work Order Detail / Summarized Labor Reports) are included to support variances. A narrative on how to read the report is included on page 2.

- a. See explanation on pages 3 to 8.
- b. See explanation on pages 9 to 10.
- c. See explanation on pages 11 to 32.
- d. See explanation on pages 33 to 43.
- e. HECO objects to providing “variance reports” on the basis stated in the objections and response to CA-IR-242.

Hawaiian Electric Company, Inc.
Rate Case – Test Year 2005
Work Order Detail Report - Narrative
Report No. 1652

Parameters:

- Selected one work order per report

Data represented is transaction data.

- Primary sort is by code block with similar transactions grouped together.
- Secondary sort within each group is the date chronologically ascending by transaction date.
- The dept. RA and Expense element is included in the code block for each transaction.
- A subtotal is provided for each group of transaction.
- For material purchases and outside service transactions, additional data provided such as supplier no., invoice no., invoice item no., invoice item description, voucher/journal entry no., voucher/journal entry description, stock code, stock description, purchase order no., unit of purchase and quantity.

Hawaiian Electric Company, Inc.
2005 TEST YEAR

OTHER PRODUCTION
OPERATIONS

(IN THOUSANDS)

Operation Cost - 2000	\$21,190
Operation Cost - 1999	\$16,673
	<u>\$4,517</u>

<u>DESCRIPTION</u>	<u>VAR AMT</u>	<u>COMMENTS</u>
<u>Activity 878- Cmply Sld & Haz Waste</u>	\$801	Outside Svcs- Major cost for removal of hazardous material from structures. See pages 4 to 8 for transactions related to work orders PR014623-HPP Unit 5&6 Asbestos Removal for \$222k and PR015081-HPP Interior 2nd Flr Removal of lead for \$351k.
<u>Activity 242- Oper & Mon Plt Eq-Boiler</u>	\$1,268	Primarily due to more outside services activity in Kahe and Waiau operations. No single material item was noted, however, there were higher than normal cost due to trucking water for demineralizer breakdown and need for contract chemist. Also, chemical material costs were higher in 2000 vs. 1999.
<u>G0001319 - Research New Technology</u>	\$252	Represents cost for EPRI funded projects that were new in 2000.
<u>Emission Fee Waiver in 1999</u>	\$600	Refer to CA-IR-183 for further explanation
<u>Writedown of Barber's Pt Regulatory Asse</u>	\$1,237	Refer to Docket No. 95-0047, DNO 18872 filed 89/5/01 for the recognition of the Barber's Pt unit cost as a regulatory asset.

\$4,158

1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR014623 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Parent WO:

Work Order: PR014623 HPP UNIT 5&7 ASBESTOS REMOVAL

Invoice Transactions

Trans Date	Acct Code	Cat No	Supplier No	Inv No	Inv Item No	Inv Item Desc	Contract No	Portion No	Element No	Trans Amt
Expense Element: 501 Outside Svcs-General										
09/26/2000	PIH878HSTNENPIZZZZZ501		004703	B1017	001	REPLACE & REPAIR D				777.97
11/14/2000	PIH878HSTNENPIZZZZZ501		005015	OEC-172	001	REMOVE AND DISPOS				3589.14
11/14/2000	PIH878HSTNENPIZZZZZ501		005015	OEC-172	001	REMOVE AND DISPOS				14421.27
11/14/2000	PIH878HSTNENPIZZZZZ501		005015	OEC-172	001	REMOVE AND DISPOS				7797.02
11/20/2000	PIH878HSTNENPIZZZZZ501		005015	OEC-175	001	REMOVE AND DISPOS				28996.61
11/27/2000	PIH878HSTNENPIZZZZZ501		005015	OEC-177	001	REMOVE AND DISPOS				34865.49
11/27/2000	PIH878HSTNENPIZZZZZ501		005015	OEC-177	001	REMOVE AND DISPOS				31392.00
12/15/2000	PIH878HSTNENPIZZZZZ501		005015	OEC-179	001	REMOVE AND DISPOS				23996.12
12/21/2000	PIH878HSTNENPIZZZZZ501		005015	OEC-182	001	REMOVE AND DISPOS				22472.43
12/21/2000	PIH878HSTNENPIZZZZZ501		005015	OEC-182	001	REMOVE AND DISPOS				30722.08
12/28/2000	PIH878HSTNENPIZZZZZ501		005015	OEC-182	001	REMOVE AND DISPOS				23253.92
Expense Element: 501										Subtotal: 222264.05
Total:										222264.05

Labor Costs

Process Pd	Trans Date	Acct Code	Emp ID	Last Name	First Name	No of Hours	Trans Amt
Expense Element: 150 Labor Cost							
200009	09/19/2000	PIN878HSTNENPIZZZZZ150				0.50	15.53
	09/21/2000	PIN878HSTNENPIZZZZZ150				0.50	15.53
	09/25/2000	PIN878HSTNENPIZZZZZ150				1.00	31.06
	09/27/2000	PIN878HSTNENPIZZZZZ150				2.00	62.12
	09/28/2000	PIN878HSTNENPIZZZZZ150				1.00	31.06
	09/29/2000	PIN878HSTNENPIZZZZZ150				1.00	31.06
Subtotal:							186.36
Expense Element: 155 Labor True-up							
Subtotal:							186.36
Expense Element: 150							
Subtotal:							186.36
Expense Element: 155							
Subtotal:							14.66

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR014823 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Labor Costs

Process Pd	Trans Dte	Acct Code	Emp ID	Last Name	First Name	No of Hours	Tran Amt
Expense Element: 405		Power Supply			Expense Element: 155	Subtotal:	0.00
200009							14.66
Expense Element: 406		Corp Admin Expense			Expense Element: 405	Subtotal:	0.00
200009							42.00
Expense Element: 421		Non-Productive Wages			Expense Element: 406	Subtotal:	0.00
200009							15.00
Expense Element: 422		Employee Benefits			Expense Element: 421	Subtotal:	0.00
200009							30.00
Expense Element: 423		Payroll Taxes			Expense Element: 422	Subtotal:	0.00
200009							-36.00
					Expense Element: 423	Subtotal:	0.00
					Total:	6.00	270.14
					Work Order Total:		222534.19

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Order Detail / Summarized Labor Report

Parent WO: * WO Number: PR015081 From Date: 200001 To Date: 200012 Show Emp Info: No

1 H1 Interior 2nd floor removal of lead

Transactions

Acct Code	Cat No	Supplier No	Inv No	Inv Item No	Inv Item Desc	Contract No	Portion No	Element No	Tran Amt
Element: 501 Outside Svcs-General									
3	PIN878HSTNENPIZZZZZ501	009563	HECO00	001	SPCC TO PROVIDE C				1100.00
3	PIN878HSTNENPIZZZZZ501	007108	150585	001	HPP INT PAINT-TO 11/	PIP00017	01	01	133758.00
3	PIN878HSTNENPIZZZZZ501	009563	HECO00	001	SPCC TO PROVIDE C				7376.00
3	PIN878HSTNENPIZZZZZ501	009563	HECO00	001	SPCC TO PROVIDE C				1100.00
3	PIN878HSTNENPIZZZZZ501	007108	150590	001	LABOR	PIP00017	01	01	207312.00
Expense Element: 501 Subtotal:									350646.00
Total:									350646.00

ts

Tran Date	Acct Code	Emp ID	Last Name	First Name	No of Hours	Tran Amt
Element: 150 Labor Cost						
10/30/2000	PIN878HSTNENPIZZZZZ150				1.00	29.11
10/30/2000	PIN878HSTNENPIZZZZZ150				6.00	174.66
Subtotal:						203.77
11/29/2000	PIN878HSTNENPIZZZZZ150				1.00	29.11
11/29/2000	PIN878HSTNENPIZZZZZ150				1.00	29.11
11/30/2000	PIN878HSTNENPIZZZZZ150				2.00	58.22
Subtotal:						116.44
12/01/2000	PIN878HSTNENPIZZZZZ150				1.00	29.11
12/01/2000	PIN878HSTNENPIZZZZZ150				1.00	29.11
12/04/2000	PIN878HSTNENPIZZZZZ150				1.00	29.11
12/08/2000	PIN878HSTNENPIZZZZZ150				3.00	87.33
Subtotal:						174.66
Expense Element: 150 Subtotal:						494.87
Element: 155 Labor True-up					0.00	6.36

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR015081 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Stock Material Transactions

Trans Date	Acct Code	Stock Code	Qty	Unit of Issue	Item Name	Description	Tran Amt
Expense Element: 201 Mail-Issues/Purchases							
11/09/2000	PIN878HSTNENPIZZZZZ201	000251884	3	EA	BODY, CONNE		47.83
11/09/2000	PIN878HSTNENPIZZZZZ201	000251900	3	EA	CAP, PLUG, 20		36.58
Expense Element: 201 Subtotal:							84.41
Total:							84.41

Work Order Total: 351473.62

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Hawaiian Electric Company, Inc.
2005 TEST YEAR

OTHER PRODUCTION
MAINTENANCE

(IN THOUSANDS)

Maint Cost - 1998	\$11,704
Maint Cost - 1997	<u>\$14,543</u>
	<u>(\$2,839)</u>

<u>DESCRIPTION</u>	<u>VAR AMT</u>	<u>COMMENTS</u>
<u>Different mix of project cost</u>	(\$1,653)	The mix of project cost, mainly overhauls vary from year to year with different work scope. See list of projects on page 10.

EXPLANATION ON REMAINING VARIANCE UNAVAILABLE. THE REMAINING VARIANCE WOULD BE APPLICABLE TO NON-PROJECTS.

(\$1,653)

Hawaiian Electric Company, Inc.
Rate Case - Test Year 2005

Prod O&M Unit Project Comparison - 1997 vs. 1998

<u>Unit</u>	<u>1997</u>	<u>1998</u>	<u>Var</u>
Kahe 1	6,065	0	(6,065)
Kahe 2	0	828,261	828,261
Kahe 3	24,080	622,324	598,244
Kahe 4	(50)	7,186	7,236
Kahe 5	683,265	1,316	(681,949)
Kahe 6	517,841	1,464	(516,377)
Waiau 3	413,529	122,785	(290,744)
Waiau 4	5,029	111,614	106,585
Waiau 5	13,664	675	(12,989)
Waiau 6	12,432	257,960	245,528
Waiau 7	690,433	2,509	(687,924)
Waiau 8	536,146	216	(535,930)
Waiau 9	11	0	(11)
Waiau 10	3,418	93,691	90,273
Hono 8	199,085	34,516	(164,569)
Hono 9	632,187	0	(632,187)
	3,737,135	2,084,517	(1,652,618)

Hawaiian Electric Company, Inc.
2005 TEST YEAR

OTHER PRODUCTION
MAINTENANCE

(IN THOUSANDS)

Maint Cost - 2000	\$24,377
Maint Cost - 1999	<u>\$17,798</u>
	<u>\$6,579</u>

<u>DESCRIPTION</u>	<u>VAR AMT</u>	<u>COMMENTS</u>
<u>Different mix of project cost</u>	\$2,841	The mix of project cost, mainly overhauls vary from year to year with different work scope. See list of projects on page 12.
<u>Activity 265- Maint Com Structures - Corr</u>	\$2,376	Primarily for Outside Services- Painting W5 structure in 2000. See pages 13 to 19 for work order PR013304 details for \$1,571k. Also, painted K5 structure in 2000. See pages 20 to 25 for workorder PR014008 details for \$643k.
<u>Activity 262- Maint Steam Turbo Eq-Corr</u>	\$748	More outside services cost in this activity in 2000. Various transactions noted with one significant item for K5/6 Stilling Basin Structural repair for \$211k. See pages 26 to 32 for work order PR004485 details.

\$5,965

Acct Blk Desc	Prod Maint
Proj_or_Non	Project

*Proj #	Project	Data	
		FY99 Act	FY00 Act
P0000011	Waiau 9 February 1999 Outage	25,715	234
P0000012	Kahe 1 April 1999 Overhaul	1,761,439	4,400
P0000013	Kahe 4 June 1999 Overhaul	1,335,064	29,314
P0000014	Waiau 10 July 1999 Outage	15,363	824
P0000015	Kahe 6 August 1999 Overhaul	1,914,485	31,876
P0000032	Core Marketing Pgms		0
P0000043	Waiau 3 January 1999 Overhaul	416,774	2,545
P0000044	Waiau 5 February 1999 Overhaul	759,235	151
P0000045	Project Apprise	0	73,342
P0000046	Heco Year 2000 O&M Expenses	0	4,866
P0000137	Honolulu 8 Overhaul	0	582,887
P0000138	Honolulu 9 Overhaul		
P0000139	Kahe 4 Overhaul	0	1,510,789
P0000140	Kahe 5 Overhaul	0	1,708,609
P0000141	Waiau 7 Overhaul	0	2,794,001
P0000142	WAI AU 8 OVERHAUL	208,113	2,350,404
P0000178	Recognition Program	0	125
P0000243	Waiau 6 2001 Overhaul	0	239,393
P0000244	Waiau 4 2001 Overhaul	0	8,638
P000ABAN	Aban Project - Holding	0	982
P1081000	Capitalized Tools & Equip	2,316	4,118
P1429000	Misc PowerPlant Additions	71,554	6,458
P7720000	K4 Gen Retaining Ring Repl	3,000	
Grand Total		6,513,058	9,353,956

Increase 2,840,898

1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR013304 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Parent WO:

Work Order: PR013304 WS:STRUCTURE CORROSION CONTROL

Equipment Costs

Tran Date	Acct Code	Equip No	Equip Reference	No of Hours	Operator ID	Tran Amt
Expense Element: 301 Vehicles						
07/13/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034720	1.30	00000009203	2.60
08/17/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
10/06/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034101	1.00	00000008811	4.00
10/23/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
10/24/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
10/25/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
10/26/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
10/27/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
10/30/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	2.00	00000008326	6.00
10/31/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
11/01/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
11/03/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
11/06/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
11/07/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
11/08/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
11/09/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	2.00	00000008326	6.00
11/13/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
11/14/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
11/15/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
11/16/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	2.00	00000008326	6.00
11/18/2000	PIX265WSTNENPIZZZZ301	000000003492	000000034090	1.00	00000008326	3.00
Expense Element: 301 Subtotal:						72.60
Total:						72.60

Invoice Transactions

Tran Date	Acct Code	Cat No	Supplier No	Inv No	Inv Item No	Inv Item Desc	Contract No	Portion No	Element No	Tran Amt
Expense Element: 501 Outside Svcs-General										
10/26/2000	PIX265WSTNENPIZZZZ501		009563	HECO00	001	W5 BOILER STRUCTUR				1824.00
10/30/2000	PIX265WSTNENPIZZZZ501		003563	5502	001	WAIUA 5 STRUCTURE	PIP00009	01	01	196287.00

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR013304 From Date: 200001 To Date: 200012 Show Emp Infn: No

Company: HECO

Invoice Transactions

Trans Date	Acct Code	Cat No	Supplier No	Inv No	Inv Item No	Inv Item Desc	Contract No	Portion No	Element No	Trans Amt
10/30/2000	PIX265WSTNENPIZZZZZ501		003563	5460	001	WAI AU 5 PRJ 8&9 FLO	PIP00009	01	01	57641.00
10/31/2000	PIX265WSTNENPIZZZZZ501		003563	5460	001	WAI AU 5 PRJ 8&9 FLO	PIP00009	01	01	57641.00
10/31/2000	PIX265WSTNENPIZZZZZ501		003563	5460	001	WAI AU 5 PRJ 8&9 FLO	PIP00009	01	01	-57641.00
10/31/2000	PIX265WSTNENPIZZZZZ501		003563	5502	001	WAI AU 5 STRUCTURE	PIP00009	01	01	196287.00
10/31/2000	PIX265WSTNENPIZZZZZ501		003563	5502	001	WAI AU 5 STRUCTURE	PIP00009	01	01	-196287.00
12/01/2000	PIX265WSTNENPIZZZZZ501		009563	HECO00	001	W5 BOILER SRUCTUR	PIP00009	01	01	13208.40
12/1/2000	PIX265WSTNENPIZZZZZ501		003563	5556	001	LABOR	PIP00009	01	01	177091.44
12/13/2000	PIX265WSTNENPIZZZZZ501		003563	5526	001	LABOR	PIP00009	01	01	380293.16
12/15/2000	PIX265WSTNENPIZZZZZ501		003563	5526	001	LABOR	PIP00009	01	01	380293.16
12/15/2000	PIX265WSTNENPIZZZZZ501		003563	5556	001	LABOR	PIP00009	01	01	177091.44
12/18/2000	PIX265WSTNENPIZZZZZ501		009563	HECO00	001	W5 BOILER SRUCTUR	PIP00009	01	01	1467.60
12/21/2000	PIX265WSTNENPIZZZZZ501		003563	5590	001	LABOR	PIP00009	01	01	185637.86

Expense Element: 501 Subtotal: 1570835.06
Total: 1570835.06

Labor Costs

Process Pd	Trans Date	Acct Code	Emp ID	Last Name	First Name	No of Hours	Trans Amt
200007	07/13/2000	PBT265WSTNENPIZZZZZ150				1.50	30.81
	07/13/2000	PBT265WSTNENPIZZZZZ150				3.00	86.97
	07/13/2000	PBT265WSTNENPIZZZZZ150				1.00	28.99
	07/13/2000	PBT265WSTNENPIZZZZZ150				4.00	115.96
	07/13/2000	PBT265WSTNENPIZZZZZ150				9.00	260.91
	07/13/2000	PBT265WSTNENPIZZZZZ150				8.00	231.92
	07/13/2000	PBT265WSTNENPIZZZZZ150				8.00	231.92
	07/13/2000	PBT265WSTNENPIZZZZZ150				1.00	28.99
	07/13/2000	PBT265WSTNENPIZZZZZ150				4.00	115.96
	07/13/2000	PBT265WSTNENPIZZZZZ150				3.00	86.97
	07/13/2000	PBT265WSTNENPIZZZZZ150				1.00	28.99
	07/13/2000	PBT265WSTNENPIZZZZZ150				9.00	260.91
						Subtotal:	1509.30
200008	08/17/2000	PIX265WSTNENPIZZZZZ150				1.00	0.00

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR013304 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Labor Costs

Process Pd	Trans Dte	Acct Code	Emp ID	Last Name	First Name	No of Hours	Tran Amt
Subtotal:							0.00
200009	09/18/2000	PIX265WSTNENPIZZZZZ150				1.00	0.00
	09/18/2000	PIX265WSTNENPIZZZZZ150				4.00	114.32
	09/22/2000	PIX265WSTNENPIZZZZZ150				2.00	57.16
Subtotal:							28.58
200010	10/06/2000	PIX265WSTNENPIZZZZZ150				7.00	200.06
	10/11/2000	PIX265WSTNENPIZZZZZ150				1.00	28.58
	10/23/2000	PIX265WSTNENPIZZZZZ150				2.00	57.16
	10/24/2000	PIX265WSTNENPIZZZZZ150				1.50	0.00
	10/25/2000	PIX265WSTNENPIZZZZZ150				2.00	0.00
	10/26/2000	PIX265WSTNENPIZZZZZ150				1.00	0.00
	10/27/2000	PIX265WSTNENPIZZZZZ150				1.00	0.00
	10/28/2000	PIX265WSTNENPIZZZZZ150				2.00	0.00
	10/30/2000	PIX265WSTNENPIZZZZZ150				1.00	31.06
	10/31/2000	PIX265WSTNENPIZZZZZ150				1.00	31.06
Subtotal:							0.00
200011	11/01/2000	PIX265WSTNENPIZZZZZ150				13.50	147.86
	11/03/2000	PIX265WSTNENPIZZZZZ150				1.00	31.06
	11/04/2000	PIX265WSTNENPIZZZZZ150				2.00	62.12
	11/06/2000	PIX265WSTNENPIZZZZZ150				2.00	62.12
	11/07/2000	PIX265WSTNENPIZZZZZ150				1.00	0.00
	11/08/2000	PIX265WSTNENPIZZZZZ150				1.00	0.00
	11/09/2000	PIX265WSTNENPIZZZZZ150				2.00	0.00
	11/13/2000	PIX265WSTNENPIZZZZZ150				1.00	0.00
	11/14/2000	PIX265WSTNENPIZZZZZ150				1.00	31.06
	11/15/2000	PIX265WSTNENPIZZZZZ150				1.00	31.06
	11/16/2000	PIX265WSTNENPIZZZZZ150				2.00	62.12
	11/18/2000	PIX265WSTNENPIZZZZZ150				1.00	31.06
	11/20/2000	PIX265WSTNENPIZZZZZ150				1.00	31.06
	11/21/2000	PIX265WSTNENPIZZZZZ150				2.00	62.12
Subtotal:							62.12

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Emp Info: No

Hours	Tran Amt
2.00	62.12
2.00	57.16
3.00	93.18
2.00	62.12
1.00	31.06
1.00	31.06
31.00	802.60
1.00	0.00
2.00	62.12
1.00	31.06
1.00	31.06
1.00	31.06
1.00	31.06
1.00	31.06
1.00	0.00
2.00	0.00
1.00	0.00
12.00	217.42
17.00	2877.24
0.00	10.80
0.00	31.95
0.00	27.65
0.00	322.22
0.00	247.33
0.00	167.70
0.00	807.86
0.00	722.63
0.00	722.63

1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR013304 From Date: 200001 To Date: 200012 Show Emp Info: No
Company: HECO

Labor Costs

Process Pd	Trans Dte	Acct Code	Emp ID	Last Name	First Name	No of Hours	Tran Amt
Expense Element: 405 Power Supply							
200008						0.00	7.00
200009						0.00	49.00
200010						0.00	121.50
200011						0.00	279.00
200012						0.00	108.00
Expense Element: 405 Subtotal:							564.50
Expense Element: 406 Corp Admin Expense							
200007						0.00	147.48
200008						0.00	2.50
200009						0.00	17.50
200010						0.00	29.70
200011						0.00	68.20
200012						0.00	26.40
Expense Element: 406 Subtotal:							291.78
Expense Element: 421 Non-Productive Wages							
200007						0.00	243.33
200008						0.00	5.00
200009						0.00	35.00
200010						0.00	50.63
200011						0.00	116.25
200012						0.00	36.00
Expense Element: 421 Subtotal:							486.21
Expense Element: 422 Employee Benefits							
200007						0.00	-46.93
200008						0.00	-4.84
200009						0.00	-42.00
200010						0.00	-81.00
200011						0.00	-186.00
200012						0.00	-102.00
Expense Element: 422 Subtotal:							-462.87

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR013304 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Labor Costs

Process Pd	Trans Dte	Acct Code	Emp ID	Last Name	First Name	No of Hours	Trans Amt
Expense Element: 423 Payroll Taxes							
200007						0.00	132.93
200008						0.00	2.88
200009						0.00	20.49
200010						0.00	37.59
200011						0.00	83.94
200012						0.00	28.89
Expense Element: 423 Subtotal:							306.72
Total:							117.00
Expense Element: 423 Subtotal:							5593.86

Manual Journal Vouchers

Trans Dte	Acct Code	Voucher No	Description	Accountant Code	Qty Amt	Trans Amt
Expense Element: 205 Mat-Purchasing Card						
07/13/2000	PBT265WSTNENPIZZZZ205	PF40005265	55D JON YANAGIDA	PACCESS	0	5.20
Expense Element: 205 Subtotal:						5.20
Expense Element: 430 AFUDC-Debt						
07/13/2000	PIX265WSTNENPIZZZZ430	P000002242	AFUDC Journal Run		0	0.01
07/13/2000	PIX265WSTNENPIZZZZ430	P000002814	AFUDC Journal Run		0	0.01
07/13/2000	PIX265WSTNENPIZZZZ430	P000001809	AFUDC Journal Run		0	0.01
07/13/2000	PIX265WSTNENPIZZZZ430	P000001537	AFUDC Journal Run		0	0.86
Expense Element: 430 Subtotal:						0.89
Expense Element: 431 AFUDC-Equity						
07/13/2000	PIX265WSTNENPIZZZZ431	P000001537	AFUDC Journal Run		0	1.36
07/13/2000	PIX265WSTNENPIZZZZ431	P000002242	AFUDC Journal Run		0	0.02
07/13/2000	PIX265WSTNENPIZZZZ431	P000002814	AFUDC Journal Run		0	0.01
07/13/2000	PIX265WSTNENPIZZZZ431	P000001809	AFUDC Journal Run		0	0.02
Expense Element: 431 Subtotal:						1.41
Expense Element: 501 Outside Svcs-General						
12/20/2000	PIX265WSTNENPIZZZZ501	FA321200	REVERSE DUPLICATE TRANSFER	0000007731	0	-177091.44
12/20/2000	PIX265WSTNENPIZZZZ501	FA321200	REVERSE DUPLICATE TRANSFER	0000007731	0	-380293.16
Expense Element: 501 Subtotal:						-557384.60

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR013304 From Date: 200001 To Date: 200012 Show Emp Info: No
 Company: HECO

Stock Material Transactions									
Tran Dte	Acct Code	Stock Code	Qty	Unit of Issue	Item Name	Description	Tran Amt		
Expense Element: 201								Total:	-557377.10
09/19/2000	PIX265WSTNENPIZZZZZ201	000253401	1	EA	PLUG, ARKTIT		235.07		
09/20/2000	PIX265WSTNENPIZZZZZ201	000251900	6	EA	CAP, PLUG, 20		73.20		
09/21/2000	PIX265WSTNENPIZZZZZ201	000251884	4	EA	BODY, CONNE		56.80		
09/26/2000	PIX265WSTNENPIZZZZZ201	000251884	2	EA	BODY, CONNE		28.41		
10/11/2000	PIX265WSTNENPIZZZZZ201	000262881	1	EA	COVER, COND		3.51		
Expense Element: 201							Subtotal:	396.99	
							Total:	396.99	
							Work Order Total:	1019521.41	

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR014008 From Date: 200001 To Date: 200012 Show Emp Info: No
Company: HECO Parent WO:

Work Order: PR014008 KAHE 5 STRUCTURAL PAINTING

Equipment Costs

Tran Date	Acct Code	Equip No	Equip Reference	No of Hours	Operator ID	Tran Amt
Expense Element: 301 Vehicles						
10/17/2000	PIL259KSTNENPIZZZZ301	000000020688	000000034727	5.00	0000008622	20.00
11/06/2000	PIL259KSTNENPIZZZZ301	000000020688	000000034474	3.30	0000008622	9.90
11/08/2000	PIL259KSTNENPIZZZZ301	000000020688	000000034734	5.30	0000008622	15.90
Expense Element: 301 Subtotal:						45.80
Total:						45.80

Invoice Transactions

Tran Date	Acct Code	Cat No	Supplier No	Inv No	Inv Item No	Inv Item Desc	Contract No	Portion No	Element No	Tran Amt
Expense Element: 501 Outside Svcs-General										
10/30/2000	PIL259KSTNENPIZZZZ501		003563	5503	001	KAHE 5 PNTNG 8-10FL	PIP00016	01	01	91297.00
11/13/2000	PIL259KSTNENPIZZZZ501		009563	HECO00	001	KAHE SURFACE PREP				475.00
11/27/2000	PIL259KSTNENPIZZZZ501		003563	5527	001	KAHE 5 PAINTING PRJ	PIP00016	01	01	240183.50
12/01/2000	PIL259KSTNENPIZZZZ501		009563	HECO00	001	KAHE SURFACE PREP				475.00
12/01/2000	PIL259KSTNENPIZZZZ501		009563	HECO00	001	KAHE SURFACE PREP				10822.50
12/12/2000	PIL259KSTNENPIZZZZ501		003563	5555	001	LABOR	PIP00016	01	01	186643.50
12/16/2000	PIL259KSTNENPIZZZZ501		003563	05588	001	LABOR	PIP00016	01	01	112622.50
Expense Element: 501 Subtotal:										642519.00
Total:										642519.00

Labor Costs

Process Id	Tran Date	Acct Code	Emp ID	Last Name	First Name	No of Hours	Tran Amt
Expense Element: 150 Labor Cost							
200008	08/10/2000	PBT259KSTNENPIZZZZ150				8.00	231.92
	08/11/2000	PBT259KSTNENPIZZZZ150				8.00	231.92
	08/14/2000	PBT259KSTNENPIZZZZ150				8.00	231.92
	08/15/2000	PBT259KSTNENPIZZZZ150				2.00	57.98
Subtotal:							753.74
200009	09/07/2000	PIP259KSTNENPIZZZZ150				3.00	90.81

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR014008 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Labor Costs

Process Pd	Trans Date	Acct Code	Emp ID	Last Name	First Name	No of Hours	Trans Amt
200010	09/07/2000	PBT259KSTNENPIZZZZZ150				6.00	173.94
	09/08/2000	PIP259KSTNENPIZZZZZ150				1.00	30.27
	09/12/2000	PBT259KSTNENPIZZZZZ150				4.00	115.96
	09/13/2000	PIP259KSTNENPIZZZZZ150				2.00	60.54
	09/21/2000	PBT259KSTNENPIZZZZZ150				6.00	173.94
	09/25/2000	PBT259KSTNENPIZZZZZ150				4.00	115.96
	09/28/2000	PBT259KSTNENPIZZZZZ150				4.00	115.96
	09/29/2000	PBT259KSTNENPIZZZZZ150				4.00	115.96
					Subtotal:	34.00	993.34
	10/04/2000	PBT259KSTNENPIZZZZZ150				2.00	57.98
200011	10/17/2000	PIP259KSTNENPIZZZZZ150				3.00	90.81
	10/18/2000	PIP259KSTNENPIZZZZZ150				2.00	60.54
	10/19/2000	PIP259KSTNENPIZZZZZ150				2.00	60.54
	10/20/2000	PIP259KSTNENPIZZZZZ150				2.00	60.54
	10/23/2000	PIP259KSTNENPIZZZZZ150				2.00	60.54
	10/24/2000	PIP259KSTNENPIZZZZZ150				2.00	60.54
	10/25/2000	PIP259KSTNENPIZZZZZ150				2.00	60.54
	10/26/2000	PIP259KSTNENPIZZZZZ150				2.00	60.54
	10/26/2000	PBT259KSTNENPIZZZZZ150				4.00	115.96
	10/27/2000	PIP259KSTNENPIZZZZZ150				4.00	121.08
200011	10/30/2000	PIP259KSTNENPIZZZZZ150				2.00	60.54
	10/31/2000	PIP259KSTNENPIZZZZZ150				2.00	60.54
					Subtotal:	31.00	930.69
	11/01/2000	PIP259KSTNENPIZZZZZ150				1.00	30.27
	11/02/2000	PIP259KSTNENPIZZZZZ150				2.00	60.54
	11/03/2000	PIP259KSTNENPIZZZZZ150				3.00	90.81
	11/03/2000	PBT259KSTNENPIZZZZZ150				4.00	115.96
	11/06/2000	PIP259KSTNENPIZZZZZ150				1.00	30.27
	11/06/2000	PBT259KSTNENPIZZZZZ150				4.00	115.96
	11/08/2000	PIP259KSTNENPIZZZZZ150				2.00	60.54
	11/09/2000	PIP259KSTNENPIZZZZZ150				1.00	30.27

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

Divid: P Parent WO: * WO Number: PR014008 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Labor Costs

Process Pd	Tran Date	Acct Code	Emp ID	Last Name	First Name	No of Hours	Tran Amt
200012	11/13/2000	PIP259KSTNENPIZZZZ150				3.00	90.81
	11/14/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	11/15/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	11/16/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	11/17/2000	PIP259KSTNENPIZZZZ150				1.00	30.27
	11/20/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	11/21/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	11/22/2000	PIP259KSTNENPIZZZZ150				1.00	30.27
	11/22/2000	PBT259KSTNENPIZZZZ150				2.00	57.98
	11/24/2000	PBT259KSTNENPIZZZZ150				1.00	28.99
	11/27/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	11/28/2000	PIP259KSTNENPIZZZZ150				1.00	30.27
	11/29/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	11/30/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	Subtotal:					43.00	1287.53
	12/01/2000	PIP259KSTNENPIZZZZ150				1.00	30.27
	12/04/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	12/05/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	12/06/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	12/06/2000	PBT259KSTNENPIZZZZ150				2.00	57.98
	12/07/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	12/08/2000	PIP259KSTNENPIZZZZ150				1.00	30.27
	12/11/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	12/12/2000	PIP259KSTNENPIZZZZ150				1.00	30.27
	12/13/2000	PIP259KSTNENPIZZZZ150				1.00	30.27
	12/14/2000	PIP259KSTNENPIZZZZ150				1.00	30.27
	12/15/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	12/18/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	12/18/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
	12/19/2000	PIP259KSTNENPIZZZZ150				2.00	60.54
Subtotal:						25.00	754.19

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Summary Labor Report

VO Number: PR014008 From Date: 200001 To Date: 200012 Show Emp Info: No

Emp ID	Last Name	First Name	No of Hours	Tran Amt
Expense Element: 150			Subtotal:	4719.49
			0.00	-11.24
			0.00	24.57
			0.00	69.21
			0.00	90.00
			0.00	-12.39
			0.00	160.15
Expense Element: 155			Subtotal:	
			0.00	247.00
			0.00	266.00
			0.00	52.50
			0.00	96.25
			0.00	15.00
			0.00	676.75
Expense Element: 404			Subtotal:	
			0.00	42.00
			0.00	225.00
			0.00	288.00
			0.00	207.00
			0.00	762.00
Expense Element: 405			Subtotal:	
			0.00	65.00
			0.00	85.00
			0.00	68.20
			0.00	94.60
			0.00	55.00
			0.00	367.80
Expense Element: 406			Subtotal:	
			0.00	130.00

1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR014008 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Labor Costs

Process Pd	Tran Dte	Acct Code	Emp ID	Last Name	First Name	No of Hours	Tran Amt
200009						0.00	170.00
200010						0.00	116.25
200011						0.00	181.25
200012						0.00	75.00
Expense Element: 421 Subtotal:							652.50
Employees Benefits							
200008						0.00	-128.44
200009						0.00	-204.00
200010						0.00	-186.00
200011						0.00	-258.00
200012						0.00	-212.50
Expense Element: 422 Subtotal:							-988.94
Payroll Taxes							
200008						0.00	66.82
200009						0.00	91.63
200010						0.00	80.00
200011						0.00	110.18
200012						0.00	55.60
Expense Element: 423 Subtotal:							404.23
Total:							6753.98

Manual Journal Vouchers

Tran Dte	Acct Code	Voucher No	Description	Accountant Code	Qty Amt	Tran Amt
Expense Element: 201 Mat-Issues/Purchases						
10/13/2000	PBT259KSTNENPIZZZZ201	PF4001013A	55D SHARLEEN AMOY	PACCESS	0	6.23
Expense Element: 201 Subtotal:					0	6.23
Expense Element: 501 Outside Svcs-General						
10/13/2000	PBT259KSTNENPIZZZZ501	PF4001013A	55D SHARLEEN AMOY	PACCESS	0	1.50
Expense Element: 501 Subtotal:					0	1.50
Total:					0	7.73

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR014008 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Stock Material Transactions

Trans Date	Acct Code	Stock Code	Qty	Unit of Issue	Item Name	Description	Tran Amt
Expense Element: 201							
10/25/2000	PIL259KSTNENPIZZZZ201	000613935	1	EA	LABEL, HAZAR FEDERAL, DISPOSAL, VINYL, SELF ADHESIVE		43.91
Expense Element: 201 Subtotal:							43.91
Total:							43.91
Work Order Total:							649370.42

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR004485 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Parent WO:

Work Order: PR004485 K5/6 STILLING BASIN STRUCTURAL REPAIRS

Equipment Costs

Tran Date	Acct Code	Equip No	Equip Reference	No of Hours	Operator ID	Tran Amt
Expense Element: 301 Vehicles						
01/03/2000	PI262K05NENPIZZZZ301	000000017685	000000034703	1.00	0000009203	4.00
01/11/2000	PI262K05NENPIZZZZ301	000000017685	000000034703	3.30	0000009203	13.20
01/25/2000	PI262K05NENPIZZZZ301	000000017685	000000034703	4.00	0000009203	16.00
09/27/2000	PI262K05NENPIZZZZ301	000000017685	000000034735	2.30	0000008622	6.90
				Subtotal:		40.10
				Total:		40.10

Invoice Transactions

Tran Date	Acct Code	Cat No	Supplier No	Inv No	Inv Item No	Inv Item Desc	Contract No	Portion No	Element No	Tran Amt
Expense Element: 501 Outside Svcs-General										
03/27/2000	PI262K05NENPIZZZZ501		006885	18620	001	KAHE 5/6 STILLING BA				7367.00
10/30/2000	PI262K05NENPIZZZZ501		005882	3293-001	001	KAHE 5/6 STILLING B	PIP00012	01	01	47801.00
11/16/2000	PI262K05NENPIZZZZ501		005882	3293-002	001	KAHE 5/6 STILING BSN	PIP00012	01	01	49865.00
12/15/2000	PI262K05NENPIZZZZ501		005882	3293-003	001	LABOR	PIP00012	01	01	10808.00
12/16/2000	PI262K05NENPIZZZZ501		005882	3293-004	001	LABOR	PIP00012	01	01	95562.00
				Expense Element: 501				Subtotal:		211403.00
				Total:						211403.00

Labor Costs

Process Pd	Tran Date	Acct Code	Emp ID	Last Name	First Name	No of Hours	Tran Amt
Expense Element: 150 Labor Cost							
200001	01/06/2000	PIP262K05NENPIZZZZ150				2.00	60.54
	01/07/2000	PIP262K05NENPIZZZZ150				2.00	60.54
	01/10/2000	PIP262K05NENPIZZZZ150				2.00	60.54
	01/11/2000	PIP262K05NENPIZZZZ150				1.00	30.27
	01/13/2000	PIP262K05NENPIZZZZ150				2.00	60.54
	01/16/2000	PIP262K05NENPIZZZZ150				1.00	30.27
	01/19/2000	PIP262K05NENPIZZZZ150				2.00	60.54
	01/21/2000	PIP262K05NENPIZZZZ150				1.00	30.27

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR004485 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Labor Costs

Process Id	Trans Dte	Acct Code	Emp ID	Last Name	First Name	No of Hours	Trans Amt
200002	01/24/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	01/24/2000	PBT262K05NENPIZZZZZ150				2.00	57.98
	01/25/2000	PIP262K05NENPIZZZZZ150				3.00	90.81
	01/26/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	01/27/2000	PIP262K05NENPIZZZZZ150				3.00	90.81
	01/28/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	01/31/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	Subtotal:						845.00
	02/01/2000	PIP262K05NENPIZZZZZ150				3.00	90.81
	02/01/2000	PBT262K05NENPIZZZZZ150				4.00	115.96
200003	02/02/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	02/03/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	02/04/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	02/07/2000	PIP262K05NENPIZZZZZ150				3.00	90.81
	02/09/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	02/14/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	02/15/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	02/17/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	02/22/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	02/23/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	02/24/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	02/25/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	02/28/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	02/29/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	Subtotal:						872.71
	03/01/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	03/03/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	03/06/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	03/07/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	03/09/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	03/13/2000	PIP262K05NENPIZZZZZ150				1.00	30.27

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR004485 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Labor Costs

Process Pd	Tran Dte	Acct Code	Emp ID	Last Name	First Name	No of Hours	Tran Amt
200005	03/14/2000	PIP262K05NENPIZZZZZ150				1.50	45.41
	03/15/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
Subtotal:						9.50	287.57
200006	05/24/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	05/25/2000	PIP262K05NENPIZZZZZ150				2.50	75.68
Subtotal:						3.50	105.95
200008	06/01/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	06/09/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	06/15/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	06/16/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	06/20/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	06/21/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	06/22/2000	PIP262K05NENPIZZZZZ150				4.00	121.08
	06/23/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	06/27/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
Subtotal:						15.00	454.05
200009	08/04/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	08/04/2000	PBT262K05NENPIZZZZZ150				8.00	231.92
	08/07/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
Subtotal:						11.00	322.73
200009	09/18/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	09/19/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	09/20/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	09/21/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	09/22/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	09/25/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	09/26/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	09/28/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
Subtotal:						13.00	393.51

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR004485 From Date: 200001 To Date: 200012 Show Emp Info: No
 Company: HECO

Labor Costs

Process Pd	Trans Dte	Acct Code	Emp ID	Last Name	First Name	No of Hours	Trans Amt
200010	10/02/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	10/03/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	10/04/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	10/05/2000	PIP262K05NENPIZZZZZ150				1.50	45.41
	10/10/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	10/11/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	10/12/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	10/13/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	10/16/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	10/17/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	10/18/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	10/19/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	10/20/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	10/23/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	10/25/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	10/26/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	10/27/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	10/30/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	10/31/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
Subtotal:						27.50	832.43
200011	11/01/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	11/02/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	11/03/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	11/06/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	11/09/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	11/13/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	11/14/2000	PIP262K05NENPIZZZZZ150				2.00	60.54
	11/15/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	11/20/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	11/21/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	11/27/2000	PIP262K05NENPIZZZZZ150				2.00	60.54

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Report Parameters

Show Emp Info: No

HECO

<i>Process Pd</i>	<i>Trans Dte</i>	<i>Acct Code</i>	<i>Emp ID</i>	<i>Last Name</i>	<i>Firsi Name</i>	<i>No of Hours</i>	<i>Tran Amt</i>
	11/28/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	11/29/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	11/30/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
					Subtotal:	18.00	544.86
200012	12/01/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	12/08/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	12/11/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
	12/14/2000	PIP262K05NENPIZZZZZ150				1.00	30.27
					Subtotal:	4.00	121.08
					Expense Element: 150	158.50	4779.89
						0.00	4.27
						0.00	95.31
						0.00	20.25
						0.00	9.31
						0.00	39.94
						0.00	4.53
						0.00	29.77
						0.00	73.23
						0.00	47.91
						0.00	5.93

Expense Element: 150 Subtotal:

Expense Element: 404 Energy Delivery

Expense Element: 404 Subtotal:

Expense Element: 405 Power Supply

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR004485 From Date: 200001 To Date: 200012 Show Emp Info: No

Company: HECO

Labor Costs

Process Pd	Tran Dte	Acct Code	Emp ID	Last Name	First Name	No of Hours	Tran Amt
200003						0.00	44.18
200005						0.00	17.50
200006						0.00	75.00
200008						0.00	21.00
200009						0.00	91.00
200010						0.00	247.50
200011						0.00	162.00
200012						0.00	36.00

Expense Element: 405 Subtotal:

Expense Element: 406	Corp Admin Expense					0.00	931.33
200001						0.00	85.40
200002						0.00	88.45
200003						0.00	28.98
200005						0.00	8.75
200006						0.00	37.50
200008						0.00	27.50
200009						0.00	32.50
200010						0.00	60.50
200011						0.00	39.60
200012						0.00	6.80

Expense Element: 406 Subtotal:

Expense Element: 421	Non-Productive Wages					0.00	417.98
200001						0.00	121.80
200002						0.00	126.15
200003						0.00	41.33
200005						0.00	17.50
200006						0.00	75.00
200008						0.00	55.00
200009						0.00	65.00
200010						0.00	103.13
200011						0.00	67.50
200012						0.00	12.00

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR004485 From Date: 200001 To Date: 200012 Show Emp Info: No
Company: HECO

Labor Costs

Process Id	Trans Date	Acct Code	Emp ID	Last Name	First Name	No of Hours	Trans Amt
Expense Element: 422 Employee Benefits							684.41
200001						0.00	
200002						0.00	31.64
200003						0.00	32.77
200005						0.00	10.74
200006						0.00	-12.22
200008						0.00	-52.35
200009						0.00	-54.34
200010						0.00	-78.00
200011						0.00	-165.00
200012						0.00	-108.00
						0.00	-34.00
Expense Element: 422 Subtotal:							-428.76
Expense Element: 423 Payroll Taxes							
200001						0.00	72.41
200002						0.00	82.49
200003						0.00	26.22
200005						0.00	10.37
200006						0.00	44.45
200008						0.00	29.45
200009						0.00	38.10
200010						0.00	72.41
200011						0.00	47.37
200012						0.00	9.52
Expense Element: 423 Subtotal:							432.79
Total:							7312.59
Work Order Total:							218755.69

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Hawaiian Electric Company, Inc.
2005 TEST YEAR

OTHER PRODUCTION
MAINTENANCE

(IN THOUSANDS)

Maint Cost - 2004	\$30,171
Maint Cost - 2003	<u>\$24,880</u>
	<u>\$5,291</u>

<u>DESCRIPTION</u>	<u>VAR AMT</u>	<u>COMMENTS</u>
Different mix of project cost	\$1,690	The mix of project cost, mainly overhauls vary from year to year with different work scope. See 2003 overhaul projects in CA-IR-497. none

1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR043419 From Date: 200401 To Date: 200412 Show Emp Info: No

Company: HECO

Parent WO:

Work Order: PR043419 W-7 Boiler Structure - Clean, prep,

Invoice Transactions

Trans Date	Acct Code	Car No	Supplier No	Inv No	Inv Item No	Inv Item Desc	Contract No	Portion No	Element No	Trans Amt
Expense Element: 501 Outside Svcs-General										
11/20/2004	PIX265WSTNENPIZZZZZ501	01	003563	7190	001	10/1-8/04	PIP04010	01	01	96491.90
11/20/2004	PIX265WSTNENPIZZZZZ501	01	003563	7193	001	10/9-10/15/04	PIP04010	01	01	99009.08
11/20/2004	PIX265WSTNENPIZZZZZ501	01	003563	7177	001	PERIOD ENDING 9/28/	PIP04010	01	01	92296.60
11/20/2004	PIX265WSTNENPIZZZZZ501	01	003563	7207	001	10/23-29/04	PIP04010	01	01	97330.96
11/20/2004	PIX265WSTNENPIZZZZZ501	01	003563	7223	001	10/30-11/5/04	PIP04010	01	01	95652.84
11/20/2004	PIX265WSTNENPIZZZZZ501	01	003563	7200	001	10/16-22/04	PIP04010	01	01	98170.02
11/24/2004	PIX265WSTNENPIZZZZZ501	01	003563	7230	001	11/06-11/12/04 SERVIC	PIP04010	01	01	83906.00
12/17/2004	PIX265WSTNENPIZZZZZ501		009563	HECO04	001	W-7 CORROSION CON	PIP04010	01		12489.92
12/27/2004	PIX265WSTNENPIZZZZZ501		009563	HECO04	001	W-7 CORROSION CON				4687.47
Expense Element: 501 Subtotal:										680044.79
Total:										680044.79
Work Order Total:										680044.79

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR043624 From Date: 200401 To Date: 200412 Show Emp Info: No

Company: HECO

Parent WO:

Work Order: PR043624 Assist with Maintenance of Kahe Units

Invoice Transactions

Trans Date	Acct Code	Cat No	Supplier No	Inv No	Inv Item No	Inv Item Desc	Contract No	Portion No	Element No	Trans Amt
Expense Element: 501 Outside Svcs-General										
12/06/2004	PIL259KSTNENPIZZZZ501		019871	11677	001	KPP LABOR ASSIST O				17872.80
12/29/2004	PIL259KSTNENPIZZZZ501		019871	11713	001	KAHE MAINT LABOR A				16184.01
Expense Element: 501 Subtotal:										34056.81
Total:										34056.81

Manual Journal Vouchers

Trans Date	Acct Code	Voucher No	Description	Accountant Code	Qty Amt	Trans Amt
Expense Element: 501 Outside Svcs-General						
12/08/2004	PIL259KSTNENPIZZZZ501	FA031204	RECORD KAHE HELPER CHARGES	0000007731	0	169009.87
Expense Element: 501 Subtotal:						169009.87
Total:						169009.87

Work Order Total:

203066.68

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR022709 From Date: 200401 To Date: 200412 Show Emp Info: No

Company: HECO

Parent WO:

Work Order: PR022709 Kahe 6 Corrosion Control

Invoice Transactions

Trans Date	Acct Code	Contract No	Portion No	Element No	Trans Amt
Expense Element: 501 Outside Svcs-General					
12/04/2004	PIL259K06NENPIZZZZZ501	01			
12/04/2004	PIL259K06NENPIZZZZZ501	01			
12/04/2004	PIL259K06NENPIZZZZZ501	01			
12/04/2004	PIL259K06NENPIZZZZZ501	01			
12/04/2004	PIL259K06NENPIZZZZZ501	01			
12/04/2004	PIL259K06NENPIZZZZZ501	01			
12/04/2004	PIL259K06NENPIZZZZZ501	01			
12/04/2004	PIL259K06NENPIZZZZZ501	01			
12/06/2004	PIL259K06NENPIZZZZZ501	01			
12/06/2004	PIL259K06NENPIZZZZZ501	01			
12/09/2004	PIL259K06NENPIZZZZZ501	01			
12/18/2004	PIL259K06NENPIZZZZZ501	01			
12/18/2004	PIL259K06NENPIZZZZZ501	01			
12/18/2004	PIL259K06NENPIZZZZZ501	01			
12/29/2004	PIL259K06NENPIZZZZZ501	01			

Supplier No	Inv No	Inv Item No	Inv Item Desc	Contract No	Portion No	Element No	Trans Amt
003563	7199	001	LABOR	PIP01009	01	02	71052.00
003563	7178	001	LABOR	PIP01009	01	02	78157.20
003563	7229	001	LABOR	PIP01009	01	02	60394.20
003563	7182	001	LABOR	PIP01009	01	02	92367.80
003563	7189	001	LABOR	PIP01009	01	02	85262.40
003563	7222	001	LABOR	PIP01009	01	02	56841.60
003563	7206	001	LABOR	PIP01009	01	02	63946.80
003563	7258	001	KAHE 6 ADDITIONAL S	PIP01009	01	02	26180.00
001975	50131	001	FLUSHABLE CHEMI-T				106.08
021028	3323400	001	Inv#3323400. services r				150.94
021028	3343132	001	Inv#3343132. services r				197.06
021028	3336491	001	Inv#3336491. services r				213.83
021028	3330063	001	Inv.#3330063. services r				176.09
021028	3349892	001	Inv#3349892. services r				113.20

Expense Element: 501 Subtotal: 535169.00

Total: 535169.00

Manual Journal Vouchers

Trans Date	Acct Code	Voucher No	Description	Accountant Code	Qty Amt	Trans Amt
Expense Element: 501 Outside Svcs-General						
10/06/2004	PIL259K06NENPIZZZZZ501	P000032146	accrue o/s a/p Invoices	0000020021	0	-78157.20
10/06/2004	PIL259K06NENPIZZZZZ501	P000032146	accrue o/s a/p Invoices	0000020021	0	78157.20
01/06/2005	PIL259K06NENPIZZZZZ501	PSO10412	accrue unpaid Invoices at quarter end	GLINTERFAC	0	106.08
01/06/2005	PIL259K06NENPIZZZZZ501	PSO10412	accrue unpaid Invoices at quarter end	GLINTERFAC	0	612.13

Expense Element: 501 Subtotal: 718.21

Total: 718.21

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52 Work Order Detail / Summarized Labor Report

Parameters

Unit: P

Parent WO: *

WO Number: PR022709

From Date: 200401

To Date: 200412

Show Emp Info: No

Unit: HECO

Work Order Total: 535887.21

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR035707 From Date: 200401 To Date: 200412 Show Emp Info: No

Company: HECO

Parent WO:

Work Order: PR035707 SPALL REPAIR K5/6 CWP PIT - 2003

Invoice Transactions

Trans Date	Acct Code	Cat No	Supplier No	Inv No	Inv Item No	Inv Item Desc	Contract No	Portion No	Element No	Trans Amt
Expense Element: 501 Outside Svcs-General										
04/13/2004	PIL262K06NENPIZZZZ501		005882	C1078	001	KAHE 5/6 CHILLER DE				4056.00
11/16/2004	PIL262K06NENPIZZZZ501		005882	C1137	001	KPP K5/6 CW PIT SPA				99164.65
11/30/2004	PIL262K06NENPIZZZZ501		005882	HC24110	001	KPP K5/6 CW PIT SPA				37271.06
12/14/2004	PIL262K06NENPIZZZZ501		005882	HC24110	001	K 5&6 CHLR DECK LB				6332.00
Expense Element: 501 Subtotal:										146823.71
Total:										146823.71

Labor Costs

Process Pd	Trans Date	Acct Code	Emp ID	Last Name	First Name	No of Hours	Trans Amt
Expense Element: 150 Labor Cost							
200403	03/29/2004	PIL262K06NENPIZZZZ150					
Expense Element: 155 Labor True-up							67.52
200403						2.00	67.52
200404						2.00	67.52
Expense Element: 155 Power Supply							67.52
200403						0.00	17.11
						0.00	6.16
						0.00	23.27
Expense Element: 405 Corp Admin Expense							12.48
200403						0.00	12.48
Expense Element: 406 Non-Productive Wages							5.48
200403						0.00	5.48
						0.00	5.48
						0.00	8.88
						0.00	8.88

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR035707 From Date: 200401 To Date: 200412 Show Emp Info: No
Company: HECO

Labor Costs

Process Id	Trans Date	Acct Code	Emp ID	Last Name	First Name	No of Hours	Trans Amt
Expense Element: 422 Employee Benefits							
200403						0.00	11.92
Expense Element: 422 Subtotal:							11.92
Expense Element: 423 Payroll Taxes							
200403						0.00	7.21
200404						0.00	0.52
Expense Element: 423 Subtotal:							7.73
Total:							137.28
Work Order Total:							146960.99

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR043303 From Date: 200401 To Date: 200412 Show Emp Info: No

Company: HECO

Parent WO:

Work Order: PR043303 KAHE 5-6 INTAKE STRUCT REPAIR (HORSESHOE)

Invoice Transactions

Trans Date	Acct Code	Cat No	Supplier No	Inv No	Inv Item No	Inv Item Desc	Contract No	Portion No	Element No	Trans Amt
Expense Element: 501 Outside Svcs-General										
11/30/2004	PIL262KSTNENPIZZZZZ501		001209	4583	001	KPP - RMV FENCE, BA				2895.00
12/10/2004	PIL262KSTNENPIZZZZZ501		005882	HC24110	001	KAHE 5&6 INTAKE ST				98235.00
12/17/2004	PIL262KSTNENPIZZZZZ501		005882	HC24110	001	KAHE 5/6 INSPECT IN				1546.25
12/21/2004	PIL262KSTNENPIZZZZZ501		005882	HC24120	001	KAHE 5&6 INTAKE ST				119836.00
Expense Element: 501										Subtotal: 222512.25
Total:										222512.25

Labor Costs

Process Pk	Trans Date	Acct Code	Emp ID	Last Name	First Name	No of Hours	Trans Amt
Expense Element: 150 Labor Cost							
200409	09/30/2004	PBT262KSTNENPIZZZZZ150				3.00	93.72
Subtotal:							93.72
200410	10/01/2004	PBT262KSTNENPIZZZZZ150				2.00	62.48
	10/04/2004	PBT262KSTNENPIZZZZZ150				1.00	31.24
	10/05/2004	PBT262KSTNENPIZZZZZ150				2.50	78.10
	10/06/2004	PBT262KSTNENPIZZZZZ150				1.00	31.24
	10/07/2004	PBT262KSTNENPIZZZZZ150				1.00	31.24
	10/08/2004	PBT262KSTNENPIZZZZZ150				2.50	78.10
	10/12/2004	PBT262KSTNENPIZZZZZ150				3.00	93.72
	10/13/2004	PBT262KSTNENPIZZZZZ150				1.00	31.24
Subtotal:							437.36
200411	11/01/2004	PIT262KSTNENPIZZZZZ150				3.00	95.10
	11/01/2004	PBT262KSTNENPIZZZZZ150				1.00	31.24
	11/01/2004	PIL262KSTNENPIZZZZZ150				2.00	67.52
	11/01/2004	PIL262KSTNENPIZZZZZ150				8.50	286.96
	11/03/2004	PBT262KSTNENPIZZZZZ150				1.00	31.24
	11/04/2004	PBT262KSTNENPIZZZZZ150				1.00	31.24

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P

Parent WO: *

WO Number: PR043303

From Date: 200401

To Date: 200412

Show Emp Info: No

Company: HECO

Labor Costs

Process Pd	Trans Die	Acct Code	Emp ID	Last Name	First Name	No of Hours	Tran Amt
Expense Element: 155							Subtotal:
200409		Labor True-up				16.50	543.30
200410						0.00	5.08
200411						0.00	23.69
						0.00	53.68
Expense Element: 404							Subtotal:
200409		Energy Delivery				0.00	82.43
200410						0.00	70.11
200411						0.00	327.19
						0.00	70.11
Expense Element: 405							Subtotal:
200411		Power Supply				0.00	467.41
Expense Element: 406							Subtotal:
200409		Corp Admin Expense				0.00	90.18
200410						0.00	90.18
200411						0.00	4.98
						0.00	23.24
						0.00	27.39
Expense Element: 421							Subtotal:
200409		Non-Productive Wages				0.00	55.61
200410						0.00	12.84
200411						0.00	59.92
						0.00	70.62
Expense Element: 422							Subtotal:
200409		Employee Benefits				0.00	143.38
200410						0.00	12.89
200411						0.00	59.23
						0.00	69.80

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Detail / Summarized Labor Report

WO Number: PR043303 From Date: 200401 To Date: 200412 Show Emp Info: No

Acct Code	Emp ID	Last Name	First Name	No of Hours	Tran Amt
23		Payroll Taxes	Expense Element: 422	Subtotal: 0.00	141.72
				0.00	7.91
				0.00	36.92
				0.00	47.78
			Expense Element: 423	Subtotal: 0.00	92.61
			Total:	33.50	2147.72

Voucher No	Description	Accountant Code	Qty Amt	Tran Amt
01 Mail-Issues/Purchases				
STNENPIZZZZZ201	ON COST CHG TO: 086659/001	HWB900	0	5710.06
		Expense Element: 201	Subtotal:	5710.06
01 Outside Svcs-General				
STNENPIZZZZZ501	accrue unpaid invoices at quarter end	GLINTERFAC	0	1546.25
		Expense Element: 501	Subtotal:	1546.25
		Total:		7256.31

Order Receipts

PO No	PO Item No	Supplier No	Unit of Purch	Qty	Net Price	Tran Amt
STNENPIZZZZZ201	001	005882	EA	1	40880.00	42580.61
			Expense Element: 201	Subtotal:		42580.61
			Total:			42580.61

Price Adjustments

PO No	PO Item No	Supplier No	Price Adjusted	Qty Adj	Unit of Purchase	Tran Amt
STNENPIZZZZZ201	001	005882	0.00	0	EA	-1700.61
			Expense Element: 201	Subtotal:		-1700.61
			Total:			-1700.61

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1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P	Parent WO: *	WO Number: PR0493303	From Date: 200401	To Date: 200412	Show Emp Info: No
Company: HECO					

Work Order Total: 272796.28

CA-IR-632
DOCKET NO. 04-0113
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CA-IR-633

Ref: HECO Responses to CA-IR-172 and CA-IR-178 Production Operations Labor Hours.

According to the response to CA-IR-178, at page 3 in footnote A, "This is a change from the past staffing of 16x5 operation to operate 24x7, not from a specific change in operation or scope of work." Please respond to the following regarding this statement:

- a. Explain why a "change from the past staffing" of 16x5 operations is required if there has been no specific "change in operation or scope of work" needing to be performed.
- b. Explain whether or not, for dispatch purposes, the H8, H9, W3 and W4 units were considered unavailable to serve load except during the 16x5 hours under the previous staffing plan.
- c. If the four generating units referenced in part (b) were considered available for dispatch during night and weekend hours outside of the 16x5 period, please explain specifically how such operation was conducted without the additional operator staffing that is now proposed.
- d. Provide statistical data indicative of the approximate actual operating hours during 2002, 2003 and 2004 for each of the four generating units referenced in part (b) that fell outside of the 16x5 staffing period for generation under HECO's 16x5 staffing plan.

mode of operation for W3, W4, H8, and H9 has not changed and the reserve margin has declined to the point where it is not practical to meet this operating requirement through overtime and additional staffing is now required.

- b. In the past, these cycling units were available. See response to CA-IR-529.
- c. Operation of H8&9 and W3&4 beyond the 2-shift operation, Monday through Friday (16x5) was met by scheduling personnel on overtime if the requirement was known in advance, or by extending the normal work hours of personnel scheduled to work or calling in personnel on an as needed basis if there was no advance notice. The cycling unit service hour and overtime trends for operations in HECO-608 and HECO-620 respectively, indicate frequent operation beyond the 16x5 coverage in previous years due to higher system demand.
- d. Data was available only for 2003 and 2004. The following are the hours that each unit was On-The-Bus outside of the normal two-shift operation. Referring to the overhaul summaries in CA-IR-129, the lower service hours on H8 and H9 in 2003 was attributed to H9 finishing its planned outage (which started on 11/30/02) on 3/23/03, and H8 being down for its planned outage from 4/12/03 to 12/02/03.

	Hon 8	Hon 9	Waiau 3	Waiau 4
2003	9.2	52.0	55.4	106.0
2004	80.4	213.8	140.2	236.7

- e. The overtime information for 2002, 2003, and 2004 in CA-IR-172 reflects the overtime hours outside of the 16X5 operation of W3&4 and H8&9 as well as all other overtime requirements, including overtime for holidays, absence replacement, training, scheduling conflicts, and so on. It is not possible to separate out only the overtime hours related to operation of W3&4 and H8&9 outside of the 16X5 coverage. The overtime information for

2002, 2003 and 2004, provided in CA-IR-172 for the GH reflects the manning (i.e., unit on-line or on standby) of the Honolulu Station outside of the 16x5 coverage because the Honolulu Station only has two units. As long as one of two units in a pair is dispatched to operate, or required to be manned on standby, that shift must be staffed. For Waiau, it is not possible to separate out overtime information for W3&4 only since all Waiau operators have the same RA of GW.

- f. The overtime forecasted for Honolulu is necessary to allow for holiday overtime, absence replacement, training, scheduling conflicts, etc.
- g. The overtime forecasted for Waiau is necessary to allow for holiday overtime, absence replacement, training, scheduling conflicts, etc.

CA-IR-634

Ref: HECO Responses to CA-IR-172 and CA-IR-178 Production Maintenance Labor Hours.

According to the response to CA-IR-178, at page 3 in footnote B, "This is a change in available maintenance manhours to support a greater workload and is not from a specific change in type of maintenance activity or scope of work." Please respond to the following regarding this statement:

- a. Explain why a "change in available manhours" is known to be needed if there has been no specific "change in type of maintenance activity or scope of work" required to be performed.
- b. If the Company has actually experienced changes in the "type of maintenance activity or scope of work" required to be performed, provide specific quantitative data and supporting documentation for the increased types and scope of work.
- c. Total actual production maintenance labor hours incurred in each year 2000 through 2004 (page 2 of CA-IR-178) range from a low of 227,183 in 2000 to a high of 245,786 in 2003. Please state with specificity the incremental types and scope of maintenance work that will

types of maintenance is provided in HECO T-6 on pages 11-15 and in the response to CA-IR-45.

- b. The type of maintenance has not changed, but the quantity of maintenance has increased based on the increase in demand and the age of the units. The planned vs. actual outage comparisons CA-IR-41 and CA-IR-42 illustrate the change in just two years. Also refer to CA-IR-43 and CA-IR-45.
- c. Please refer to b. above.
- d. The addition of the night crew maintenance did not exist from 2000 – 2004. As discussed in HECO T-6 beginning at line 21 on page 8 through line 8 on page 9, creation of a night maintenance crew is part of a comprehensive plan to minimize the impacts of potential reserve capacity shortfall caused by the increase in demand. Empirical evidence of this increase in just the last two years (2003 – 2004) was provided in HECO-607, HECO-608, and HECO 609.
- e. Please refer to CA-IR-33, item f. This is a duplicate question.
- f. The Travel Maintenance primarily concentrates their efforts on planned outages (PO) as shown in CA-IR-41, CA-IR-42, CA-IR-43, and Revised CA-IR-43. Based on the age of the generating units, work scope often increases due to the discovery of unanticipated problems. In order to minimize scheduling impacts, maintenance crews, supplemented with outside contractors, work long days and on weekends. The increase in demand, low reserve margins and overlapping outages place additional scheduling pressures on maintenance crews, especially on larger baseload generating units.

CA-IR-635

Ref: HECO Response to CA-IR-172 Production Labor Hours.

According to the response, test year total projected labor hours (including straight time and overtime) are projected to increase dramatically over prior year levels in every Production Department RA, in spite of the fact that HECO is not adding any Company-owned production capacity to its existing fleet of generation. Without repeating the generalizations stated throughout T-6 testimony about increasing demand levels, increased staffing plans, aging generating units, environmental regulations, etc. please provide specific quantitative data and supporting documentation indicating the Company's need for the added labor hours in each of the following RA's, relative to actual 2004 incurred labor hours:

- a. PIB Administration 20,530 test year hours (1,177 OT plus 19,353 Straight time), 60% above actual comparable 2004 levels.
- b. PIH Honolulu Operations 55,355 total hours, 40% above actual comparable 2004 levels.
- c. PIK Kahe Operations 135,813 total hours, 15% above actual 2004 levels.
- d. PIL Kahe Maintenance 81,045 total hours, 47% above actual 2004 levels.
- e. PIM Maintenance Administration 4,962 total hours, 34% above actual 2004 levels.
- f. PIN Honolulu Maintenance 18,857 total hours, 20% above actual 2004 levels.
- g. PIP Planning 50,134 total hours, 104% above actual 2004 levels.
- h. PIT Traveling Maintenance 198,746 total hours, 39% above actual 2004 levels.
- i. PIW Waiiau Operations 159,438 total hours, 34% above actual 2004 levels.
- j. PIX Waiiau Maintenance 79,164 total hours, 51% above actual 2004 levels.

HECO Response:

The tabulated data provided in CA-IR-172, page 4 and 5 (and CA-IR-48, page 8 and 9) was incorrectly titled on the second page. The tabulation has been corrected and provided on page 7 and 8 of this response. The following corrections were made:

- 1. A column for ST + OT Hours was added to minimize misinterpretation of the data.
- 2. The data on [page (2)] reflecting the 2005 TY forecast has been corrected. The total

hours changed from 698,974 hours to 698,980 hours.

3. Tabulated data headings have been corrected.

In addition, it should be noted that the recorded actual data on CA-IR-172 page 4 is data taken from payroll data and reflects actual hours paid, and is compiled by pay period. For 2002, the total period is from 12/31/2001 to 12/29/02; for 2003, the total period is from 12/30/02 to 12/28/03; and for 2004, the total period is from 12/29/03 to 12/26/04.

The 2005 TY forecast reflects data for the full calendar year from 1/1/05 to 12/31/05. This data also includes distributed or “overtime” work hours for merit-exempt employees which are non-paid hours that do not impact labor cost. RA’s impacted by merit-exempt overtime hours are noted below. The distributed labor hours are multiplied by a Standard Labor Rate which adjusts for the unpaid distributed labor hours to keep the total labor cost the same. The concept behind distributed hours is described by HECO T-13, from page 13, line 16 to page 15, line 15. See response to CA-IR-298.

This IR compares 2005 TY forecast hours and 2004 actual hours. The IR refers to this as “actual comparable 2004 levels”. For RA’s IB, IM, IO, and IP, this comparison is not accurate as the forecast labor hours for these RA’s include unpaid distributed hours as discussed above, whereas the 2004 actual labor hours reflect only paid hours.

It is also very important to note that as explained by HECO T-13, it is not possible to separate overtime into O&M, Capital, or any other category. The overtime data presented in CA-IR-172, page 4 & 5 (and the similar data in CA-IR-48, page 8 & 9), represent overtime hours for ALL types of work.

The responses below are based on applying the corrections mentioned above to each identified RA. Also, the labor hour totals for each RA include productive labor hours only and

does not include ND, or non-productive labor hours. Therefore the comparisons between 2005 TY and 2004 actual are primarily a function of headcount, the timing of filling vacancies, and the forecast level of overtime.

a. PIB Administration 19,353 test year hours (1,177 OT plus 18,176 Straight time), 51% above actual comparable 2004 levels.

1. The 1,177 hours of distributed overtime labor hours are based on non-paid merit-exempt hours and will not have an impact on labor cost. When making a comparison to 2004 and prior year actual labor hours, these distributed overtime labor hours should be ignored.

2. The differences between 2005 TY and 2004 actual straight time are attributed to the following:

- Lower 2004 actual hours due to the retirement of the Department Secretary in October 2003, and the filling of the position in April 2004.
- Lower 2004 actual hours due to a job transfer of the Budget Analyst position in January 2004, until the position was filled in May, 2004.
- Lower 2004 actual hours due to the Information Specialist position vacancy. The 2005 TY forecast includes full year hours for the Information Specialist. The need for this position is explained in Note 2 of CA-IR-48 page 16. Due to higher

anticipated Environmental field inspection needs driven by the addition of several substation distributed generation projects, this position will be replaced with an Environmental Specialist by 4th quarter, 2005, to align with the timing of the first few substation distributed generation projects.

2004 to (2) in 2005. The second Technical Trainer position was filled in 4/05. The need for this second position is explained in Note 1 of CA-IR-48, page 16. As explained in CA-IR-48, page 10, this position was filled in March 2005.

- b. PIH Honolulu Operations 50,592 total hours, 28% above actual comparable 2004 levels. As reflected in CA-IR-48, page 11, the PIH forecast adds 1 Shift Supervisor and 5 Operators to support 24X7 operation of Honolulu Power Plant. The increase in staffing accounts for the increase in labor hours from 39,598 to 50,592. The transition to 24x7 is in progress and will be completed on 6/27/05 as operators complete their training.
- c. PIK Kahe Operations 118,674 total hours, 1% above actual 2004 levels. Based on the corrections to CA-IR-172, the Kahe Operations 2005 TY is comparable to the 2004 actual levels.
- d. PIL Kahe Maintenance 73,105 total hours, 33% above actual 2004 levels. As stated in CA-IR-48, page 11 and 12, the 2005 TY forecast for PIL staffing level reflects an increase of +10 for night shift maintenance and +1 for higher work demands. The addition of these 11 personnel accounts for the increase in labor hours from 55,165 to 73,105.
- e. PIM Maintenance Administration 4,321 total hours, 17% above actual 2004 levels. The 2005 TY forecast for PIM includes 641 hours of merit-exempt distributed overtime labor hours that will not have an impact on labor cost. When making a comparison to 2004 and prior year actual labor hours, these distributed overtime labor hours should be ignored. 4,321 hours less 641 equals 3,680 hours, an amount comparable to and slightly less than the 2004 actual labor hours of 3,699.
- f. PIN Honolulu Maintenance 17,229 total hours, 10% above actual 2004 levels. The difference is attributed to lower 2004 actual labor hours compared to the full year forecast

for PIN. The lower 2004 actual labor hours was due to partial year vacancies for the Honolulu Maintenance Supervisor position that was vacant from 1/1/04 until the position was filled in 07/26/04, and a Control Technician position that was vacant from 11/15/04 until the position was filled in 02/14/05.

- g. PIP Planning 43,508 total hours, 77% above actual 2004 levels. The increase in forecast labor hours for PIP above 2004 actual is a result of a combination of increased staffing and the impact of merit-exempt distributed overtime labor hours. The 2005 TY forecast for PIP labor hours includes:
1. 6,562 hours of distributed overtime labor hours which will not be paid. When making a comparison to 2004 and prior year actual labor hours, these distributed overtime labor hours should be ignored.
 2. Full year Senior Supervisor. Due to a promotion, the Senior Supervisor position in PIP was vacant from 02/23/04 to 08/02/04. Recorded 2004 hours are reduced when compared to 2005 TY forecast .
 3. Full year for (8) Resource Planners and (4) Engineers. As shown in CA-IR-48, page 13, between 04/30/04 and 12/31/04, (3) Resource Planner vacancies were filled. A fourth vacancy was filled on 03/07/05, bringing the total Resource Planner count to 8. The 2005 TY forecast reflects the full forecast headcount of (8) Resource Planners for the entire year. The 2005 TY forecast also includes (3) O&M Engineers and (1) Boiler Reliability Optimization Engineer, for a total of (4) Engineers. Two of these O&M Engineer positions remain vacant. Applicant reviews are in progress.
 4. Full year for (2) Planning/Project Coordinators. These positions are in the interview process and the positions are expected to be filled by mid-year.

- h. PIT Traveling Maintenance 164,207 total hours, 15% above actual 2004 levels. PIT 164,207 vs. 142,618. Labor hours for PIT are driven by headcount. As reflected in CA-IR-48, pages 13 and 14, hiring to fill vacancies is complete or in progress for all vacancies.
- i. PIW Waiau Operations 133,992 total hours, 12% above actual 2004 levels. As reflected in CA-IR-48, page 14, the PIW forecast adds 7 Operators above 04/30/04 staffing level to support 24X7 operation of Waiau Power Plant. The increase in staffing accounts for the increase in labor hours from 119,453 to 133,992. As reflected in CA-IR-48, the PIW staffing level as of 02/28/05 is above the 2005 TY forecast level by (2) Operators. The transition to support 24x7 was in effect as of 3/21/05.
- j. PIX Waiau Maintenance 72,065 total hours, 37% above actual 2004 levels. PIX 72,065 vs. 52,525. As stated in CA-IR-48, page 14 to 15, the 2005 TY forecast for PIX staffing level reflects an increase of +10 for night shift maintenance and +1 for higher work demands. The addition of these 11 personnel accounts for the increase in labor hours from 52,525 to 72,065.

REVISED

Hawaiian Electric Company Inc.
Rate Case - Test Year 2005
Labor Overtime

<u>RA</u>	<u>RA Desc</u>	<u>Overtime Hours</u>	<u>Straight Time Hrs (less ND)</u>	<u>ST+OT Hours</u>	<u>Proportion OT/ST Hrs %</u>
<u>2002 Actual</u>					
PIB	Admin-PS O&M	0	11,609	11,609	0%
PIH	Honolulu Stn Oper	6,646	30,721	37,367	22%
PIK	Kahe Stn Oper	15,852	104,638	120,490	15.0%
PIL	Kahe Stn Maint	8,820	47,779	56,599	18%
PIM	Maintenance Admin	0	3,767	3,767	0%
PIN	Honolulu Stn Maint	1,691	14,116	15,807	12%
PIO	Operations Admin	0	1,772	1,772	0%
PIP	Planning	10	21,683	21,693	0%
PIT	Traveling Maintenance	28,619	120,466	149,086	24%
PIW	Waiau Stn Oper	20,107	93,426	113,533	22%
PIX	Waiau Stn Maint	7,773	43,031	50,804	18%
TOTAL		89,518	493,009	582,527	18%
<u>2003 Actual</u>					
PIB	Admin-PS O&M	15	11,417	11,432	0%
PIH	Honolulu Stn Oper	7,233	30,287	37,520	24%
PIK	Kahe Stn Oper	12,819	107,094	119,913	12%
PIL	Kahe Stn Maint	9,716	48,881	58,597	20%
PIM	Maintenance Admin	0	3,762	3,762	0%
PIN	Honolulu Stn Maint	1,425	14,004	15,429	10%
PIO	Operations Admin	0	837	837	0%
PIP	Planning	73	25,149	25,222	0%
PIT	Traveling Maintenance	26,682	116,257	142,939	23%
PIW	Waiau Stn Oper	23,641	92,184	115,825	26%
PIX	Waiau Stn Maint	7,397	38,219	45,616	19%
TOTAL		89,001	488,091	577,092	18%
<u>2004 Actual</u>					
PIB	Admin-PS O&M	5	12,830	12,835	0%
PIH	Honolulu Stn Oper	9,489	30,109	39,598	32%
PIK	Kahe Stn Oper	16,288	101,372	117,660	16%
PIL	Kahe Stn Maint	10,977	44,188	55,165	25%
PIM	Maintenance Admin	0	3,699	3,699	0%
PIN	Honolulu Stn Maint	1,997	13,714	15,711	15%
PIO	Operations Admin	0	1,576	1,576	0%
PIP	Planning	0	24,611	24,611	0%
PIT	Traveling Maintenance	34,316	108,302	142,618	32%
PIW	Waiau Stn Oper	22,760	96,693	119,453	24%
PIX	Waiau Stn Maint	11,812	40,713	52,525	29%
TOTAL		107,644	477,807	585,451	23%

REVISED

Hawaiian Electric Company Inc.
Rate Case - Test Year 2005
Labor Overtime

<u>RA</u>	<u>RA Desc</u>	<u>Overtime Hours</u>	<u>Straight Time Hrs (less ND)</u>	<u>ST+OT Hours</u>	<u>Proportion OT/ST Hrs %</u>
2005 Budget					
PIB	Admin-PS O&M	1,177	18,176	19,353	6%
PIH	Honolulu Stn Oper	4,919	45,673	50,592	11%
PIK	Kahe Stn Oper	17,139	101,535	118,674	17%
PIL	Kahe Stn Maint	7,294	65,811	73,105	11%
PIM	Maintenance Admin	641	3,680	4,321	17%
PIN	Honolulu Stn Maint	1,632	15,597	17,229	10%
PIO	Operations Admin	183	1,751	1,934	10%
PIP	Planning	6,562	36,946	43,508	18%
PIT	Traveling Maintenance	30,875	133,332	164,207	23%
PIW	Waiau Stn Oper	23,465	110,527	133,992	21%
PIX	Waiau Stn Maint	7,099	64,966	72,065	11%
TOTAL		100,986	597,994	698,980	17%

Straight Time hours exclude ND, Non-Productive hours, which are charged to Clearing (this includes Holiday, Sick, and Vacation hours).

2005 Budget - Breakdown of Hours (Excluding ND, Non-Productive)				
		<u>O&M Hrs</u>	<u>All Oth Hrs</u>	<u>Total</u>
PIB	Admin-PS O&M	12,944	6,409	19,353
PIH	Honolulu Stn Oper	45,649	4,943	50,592
PIK	Kahe Stn Oper	108,885	9,789	118,674
PIL	Kahe Stn Maint	67,618	5,487	73,105
PIM	Maintenance Admin	2,079	2,242	4,321
PIN	Honolulu Stn Maint	15,801	1,428	17,229
PIO	Operations Admin	426	1,508	1,934
PIP	Planning	35,794	7,714	43,508
PIT	Traveling Maintenance	120,284	43,923	164,207
PIW	Waiau Stn Oper	123,649	10,343	133,992
PIX	Waiau Stn Maint	64,666	7,399	72,065
TOTAL		597,795	101,185	698,980

Agrees with labor hours reported in response to CA-IR-1, HECO T-6, Attachment 3A, Page 1 of 17, except for RA PIP which has a difference of 200 hours. Difference represents supervisory expense hours coded with codeblock indicator "NS" which was not included in CA-IR-1 along with the indicator "NE" hours representing the majority of the O&M expense hours. The 200 hours represents less than .1% of the total O&M hours.

CA-IR-636

Ref: HECO Responses to CA-IR-48(g) and CA-IR-175 Production Work Backlog.

According to part (c) of the IR-175 response, statistical data indicating the relative amounts of "backlog work" that existed at December 2002, versus December 2003, versus December 2004

that would be useful to evaluate the adequacy of historical staffing and expenditure levels relative to work requirements is "not applicable." The response to CA-IR-48, part (g) states, "Backlog statistics are not tracked and/or available in a useable format for analysis purposes."

~~Please explain how management evaluates work requirements and determines staffing levels.~~

CA-IR-637

Ref: HECO Responses to CA-IR-188 and CA-IR-244 Structures Maintenance and Discretionary Projects.

According to the response to IR-244, part (b), "There is no report or special listing that's maintained other than the current list of items as shown in a, above." Please provide the following information:

- a. Confirm that no previously prepared iterations of this prioritized current listing of structural and facility maintenance items is available.
- b. If anything other than an unqualified confirmation is provided in response to part (a), please provide available copies of the listings associated with work status in 2003 and 2004, as initially requested.
- c. Explain how the Account 511 expenditure levels at page 4 of the response to CA-IR-188 tell us anything about "The progress made in past years..." relative to the prioritized listing of structural and facility maintenance items that need to be done – how can we tell if historical expenditures are creating a longer or a shorter list of prioritized "needs?"
- d. Provide all available reports, analyses, studies, projections and other documents indicating why the "Budget 2005" level of structural maintenance is reasonable and necessary, in spite of the fact that it is significantly higher than five of the six previous years' expenses that are shown.
- e. Explain why the Kahe Pond Cleaning project captioned "Construct Projects" under PIP planning is charged to expense rather than capital accounts in the test year forecasts and provide copies of documentation supportive of such classification.

HECO Response:

- a. As mentioned in CA-IR-244, the "2005 Production O&M Priority List" is a working document that provides a prioritized list of maintenance items. Previously created iterations would need to be recreated based on actual expenditures in past years. Items completed from previous iterations of the O&M priority list would be included in the list of outside service expenditures from 2001 through 2004 provided in CA-IR-36.
- b. Please refer to CA-IR-36.
- c. Please refer to CA-IR-36 and CA-IR-296.

- . Please refer to CA-IR-296.
- e. As explained in CA-IR-2, HECO T-6, Attachment 4A, page 4 of 9, the Kahe Pond Cleaning project scope consist of the removal of approximately 7,000 cubic yards of silt from Kahe Pond 1A and is considered a maintenance activity. Per the HECO capitalization policy, one of the criteria is that the expenditures must be for a recognized property unit (capital item). In the Kahe Pond Cleaning project, the existing pond is being cleaned and there is no addition of a property unit.

CA-IR-638

Ref: HECO Response to CA-IR 240 Production Maintenance Mix

According to the response, improving trends appear to be evidenced by the declining share of “corrective” work in combination with an increasing share of “predictive” work since 1999. Please provide the following information:

- a. Confirm this interpretation of the data or explain how management interprets the reported data.
- b. Provide complete copies of the actual reports “provided to management” regarding production department activities and performance trends, including but not limited to the “Maintenance Mix” graph and all associated narrative discussions of such information.
- c. Provide complete copies of all of the underlying detailed data used to determine the percentages shown for the graph in part b, broken down between project and non-project costs by activity for each year prior to 2005.

HECO Response:

- a. Management uses the trend as it is provided in CA-IR 240 as a signal indicator of the

1999-2004 Maintenance Mix Data
(ref: CA-IR-240 Production Maintenance Mix)

	Dec-99	%	Dec-00	%	Dec-01	%	Dec-02	%	Dec-03	%	Dec-04	%
NonProject												
Corrective	\$ 9,527,920	84%	\$ 11,451,000	85%	\$ 10,332,574	82%	\$ 10,117,196	76%	\$ 10,265,592	70%	\$ 13,150,014	78%
Preventive	\$ 1,241,057	11%	\$ 1,352,829	10%	\$ 1,153,121	9%	\$ 1,826,076	14%	\$ 2,541,466	17%	\$ 1,858,961	11%
Predictive	\$ 607,118	5%	\$ 679,228	5%	\$ 1,125,270	9%	\$ 1,314,353	10%	\$ 1,849,127	13%	\$ 1,820,393	11%
Total	\$ 11,376,095		\$ 13,483,057		\$ 12,610,965		\$ 13,257,625		\$ 14,656,185		\$ 16,829,368	
Project												
Corrective	\$ 2,278,175	34%	\$ 3,655,193	36%	\$ 3,127,532	29%	\$ 3,608,644	26%	\$ 4,961,898	24%	\$ 3,304,411	17%
Preventive	\$ 3,806,791	57%	\$ 5,430,567	53%	\$ 5,536,931	50%	\$ 6,260,769	45%	\$ 10,075,521	50%	\$ 7,497,881	38%
Predictive	\$ 608,879	9%	\$ 1,126,008	11%	\$ 2,305,177	21%	\$ 3,902,319	28%	\$ 5,278,479	26%	\$ 8,723,678	45%
Total	\$ 6,693,845		\$ 10,211,768		\$ 10,969,640		\$ 13,771,732		\$ 20,315,898		\$ 19,525,970	
NP + P												
Corrective	\$ 11,806,095	65%	\$ 15,106,193	64%	\$ 13,460,106	57%	\$ 13,725,840	51%	\$ 15,227,490	44%	\$ 16,454,425	45%
Preventive	\$ 5,047,848	28%	\$ 6,783,396	29%	\$ 6,690,052	28%	\$ 8,086,845	30%	\$ 12,616,987	36%	\$ 9,356,842	26%
Predictive	\$ 1,215,996	7%	\$ 1,805,236	8%	\$ 3,430,447	15%	\$ 5,216,672	19%	\$ 7,127,606	20%	\$ 10,544,071	29%
Total	\$ 18,069,939		\$ 23,694,825		\$ 23,580,605		\$ 27,029,357		\$ 34,972,083		\$ 36,355,338	

CA-IR-639

Ref: HECO T-6 Responses to CA-IR-2, Attachment 5, page 5, and CA-IR-186; Research New Technology projects.

Please provide the following additional information:

- a. A comparable breakdown of actual incurred and budgeted technology project expenses for each year 2000 through 2004 and each available projected year subsequent to 2004, explaining whether test year projected expenses are believed to be representative of normal, ongoing activity levels for such technology projects.
- b. A copy of the pending contract with Southwest Research Institute.
- c. A breakdown of EPRI and HECO actual and expected contributions by month in 2005 and 2006 for each known biomass/biofuels project.
- d. A breakdown of EPRI, HECO and any third party actual and expected contributions by month in 2005 and 2006 for each element of the Electronic Shock Absorber project.

HECO Response:

- a. A breakdown of actual and budgeted technology project expenses for each year 2000 through 2004, and test year 2005 and 2006 is discussed below. Explanations of test year projected expenses are provided below. It should be noted that as a result of HECO's renewable energy strategy to increase its renewable energy portfolio and meet the requirements of Hawaii's Renewable Portfolio Standards law, HECO's expenditures for renewable energy activities could increase in the future so the test year level of expenses might actually understate the on-going level of expenses for this type of activity.
 - As indicated in HECO's response to CA-IR-186 part (c), the number of photovoltaic installations that can be installed in a given year as part of its Sun Power for Schools program is a function of the amount of contributions that are recorded to a liability account. Since the amount of Sun Power for School non-labor expenses will be offset by the contributions by participating customers, the test year expense should be revised

to reflect the offset. HECO will revise its test year estimates to reduce the Sun Power for Schools test year expense to zero in its rebuttal testimony.

- Although HECO evaluated biomass resources and technologies in 2000-2004, no specific funds were budgeted for this purpose during these years. Hence there is no history to compare current (i.e., test year 2005) activity levels in this area of research and development. As indicated in HECO's response to CA-IR-186 part (d), non-labor funds were budgeted to research various biomass and biofuels initiatives. HECO requires flexibility in prioritizing and expending funds for these initiatives to maximize the efficacy of its renewable energy strategy for meeting the requirements of Hawaii's Renewable Portfolio Standards law. Given the new laws related to renewable energy, funds budgeted to research biomass and biofuels are representative of normal expense levels.
- The concept and intended use of the Electronic Shock Absorber was originally conceived in 2003 so no activity occurred in years 2000-2003. Expenses in 2004 were incurred for concept development and technical investigations (Phase 1). Test year 2005 budget (NARUC Account 549) is for device construction and demonstration (Phase 2). HECO does not expect to incur this level of expense every year specifically for the Electronic Shock Absorber.

HECO expects that the Electronic Shock Absorber is the first in a line of recurring expenses related to the integration of intermittent renewable energy sources into the grid. (The Electronic Shock Absorber was developed to address the issue of instability

caused by gusty wind conditions on grids with large wind penetration.) The development of the Electronic Shock Absorber is consistent with HECO's renewable

energy strategy to increase its renewable energy portfolio and meet the requirements of
Hawaii's Renewable Portfolio Standards law.

In order to meet the requirements of the current Renewable Portfolio Standards law new
types of renewable energy technologies will have to be explored and developed.

November 2005. However, this schedule is a function of the project's progress and may change. After payments are made by HECO to the subcontractor, HECO is entitled to reimbursement from EPRI for these payments.

The test year 2005 expense applicable to Production's budget is the \$119,200 that will be paid to EPRI in 2005.

- For Phase 3 of the biofuels assessment project, \$75,000 of Unallocated Membership funds, which make up part of HECO's 2005 EPRI membership dues, are expected to be applied in June 2005. The payment amount and schedule to a yet-to-be-determined subcontractor has not been determined.
- d. Expected contributions by month (includes 4% use tax) for 2005 and 2006 for the Electronic Shock Absorber project are: \$90,870 for HECO in September 2005 (plus HELCO and MECO will contribute about \$44,000 each), \$30,290 for HECO in December 2005 (plus HELCO and MECO will contribute about \$15,000 each), and \$50,000 for HECO in February 2006 (plus HELCO and MECO will contribute about \$25,000 each) EPRI funds

CA-IR-640

Ref: HECO Response to CA-IR-182, page 3.

The responses provided for each of the following listed items did not appear to be supportive of test period proposed expense levels, either because of the lack of any historical comparable expenditures and/or because of the lack of any requested documentation as stated in the question posed as CA-IR-182. Please provide detailed documentation for the proposed test period amount for these items and provide actual expenditures to-date in 2005 (or explain why such costs should not be disallowed for lack of such support):

- a. PIL Kahe Fuel Tank “Non-recurring.”
- b. PIL Cathodic Protection “Technical Assessment” based upon “staff experience.”
- c. PIN Cathodic Protection “Technical Assessment” based upon “staff experience.”
- d. PIO Honolulu Harbor Fees “reflects other Honolulu Harbor cost that would not be covered by the amount that was accrued back in 2001.”
- e. PIX Travel Screen OH “prior to 2003, scope of work had changed such that replacement of the travel screen became capital work.”

HECO Response:

HECO objects to this IR on the grounds that it is argumentative. Without waiving the objection, HECO replies as follows:

The lack of historical comparable expenditures at the detailed RA level is not unusual given the shift of activities from year to year in the power plant to ensure safe, compliant and reliable operations. A higher level view of actual expenditures by select activities and between stations is shown on the schedule found on pages 5 – 8. Note that the schedule is the same as the schedule included in response to CA-IR-296, which addresses a similar IR request for information on select budget items by RA. The only difference is that the schedule on pages 5 – 8 has been expanded to include additional RA budget items requested in this IR. Listed for each of the above items are the activities and cost categories, which is helpful in identifying where the budget item is included on pages 5 – 8.

- c. PIN (Hono) Cathodic Protection – Act. 262 – Cost Category= Outside Services

e. PIX Travel Screen OH – Act. 260 – Cost Category= Outside Services

A more comprehensive explanation can be found on CA-IR-296 to address the shift in actual, annual expenditure levels between stations and between activities.

equipment conditions, historical cost indicators and vendor requirements in the projection of

- d. PIO (Oper) Honolulu Harbor Fees – Test year projection of \$145,600. The name “Honolulu Harbor Fees” is a carryover name created almost 10 years ago when HECO first became involved with the Honolulu Harbor Area-Wide Oil Contamination Investigation initiated by the State of Hawaii. Since then, the expense item has evolved to capture expenses related to HECO-owned abandoned fuel oil pipeline remediation in the Honolulu Harbor area.

O&M Expenses related to abandoned fuel oil pipeline activities have not been incurred in recent years. The subject work, to expose, investigate, and remediate abandoned HECO-owned fuel oil pipelines in the Honolulu Harbor area, is being coordinated with the State of Hawaii Department of Transportation repaving project for Nimitz Highway and is anticipated to start in 2005.

There are no historical comparable expenses for this work. While the extent of the work is anticipated to be limited to a total of (4) identified sections of HECO-owned abandoned fuel oil piping, the requirements of the work to be performed will be determined by the results of investigation and by the volume of fuel oil product requiring disposal. In the absence of any historical expense reference, the forecast amount of \$145,600 was felt to be a reasonable dollar amount and sufficient to cover the expenses to expose the piping, evacuate any product in the line, fill the line with grout, and dispose of the volume of product found.

The work to be completed in 2005 is currently anticipated to only include (1) of the identified sections of fuel oil piping. The cost for this one section is estimated at \$33,000. This amount will also be applied against the liability account set up in 2001 for the Iwilei District Participating Parties (formerly Honolulu Harbor Work Group) instead of being charged to O&M. Therefore, we do not anticipate any expenditures in 2005 for this line

item.

As stated in the response to CA-IR-296, from year to year O&M costs can be expected to shift between activities depending on what is required to ensure safe, compliant and reliable operations. Any forecast dollars not spent for this one activity would be shifted to allow other work to be performed on other activities.

- e. PIX Travel Screen OH – Test year projection of \$150,000. Project is projected to be completed in the 3rd quarter of 2005.

Hawaiian Electric Company, Inc.
Select ABM Activities by Plant Site
1999-2004 Actual and 2005 Budget

Act	Act Description	1999	2000	2001	2002	2003	2004	Budget 2005
a) (IN RESPONSE TO CA-IR-296)								
(ALL COST CATEGORIES)								
265	Maint Common Struct - Corrective							
	Honolulu	313,334	432,309	241,501	220,017	255,669	309,554	444,868
	Waiau	523,258	1,878,325	914,446	1,153,270	571,855	1,579,727	1,689,770
	Kahe	547,404	1,565,255	1,012,394	699,337	555,373	937,702	921,957
	Oth-Not Assigned	8,653	15,460	3,801	0	1,920	4,889	0
		1,392,649	3,891,349	2,172,142	2,072,624	1,384,817	2,831,872	3,056,595
(ONLY OUTSIDE SERVICE)								
265	Maint Common Struct - Corrective							
	Honolulu	135,465	264,919	115,489	91,395	77,077	124,849	226,800
	Waiau	155,532	1,478,597	533,357	614,777	264,360	1,233,078	1,009,004
	Kahe	279,858	1,179,692	626,884	312,446	126,937	519,470	541,400
	Oth-Not Assigned	2,910	13,500	3,717	0	891	1,403	0
		573,765	2,936,708	1,279,447	1,018,618	469,265	1,878,800	1,777,204
b) (IN RESPONSE TO CA-IR-296)								
(ALL COST CATEGORIES)								
270	Maint Fuel Feed Sys-Pred							
	Honolulu	91,154	273,375	0	111,856	205,523	73,125	285,000
	Waiau	0	0	0	0	0	0	20,149
	Kahe	0	0	0	0	0	0	0
		91,154	273,375	0	111,856	205,523	73,125	305,149
(ONLY OUTSIDE SERVICE)								
270	Maint Fuel Feed Sys-Pred							
	Honolulu	84,923	262,147	0	103,794	133,446	73,125	285,000
	Waiau	0	0	0	0	0	0	0
	Kahe	0	0	0	0	0	0	0
		84,923	262,147	0	103,794	133,446	73,125	285,000
c) (IN RESPONSE TO CA-IR-296 AND CA-IR-640)								
(ALL COST CATEGORIES)								
260	Maint Steam Turbo Eq-Prev							
	Honolulu	56,440	169,648	69,364	260,783	2,267,349	34,152	291,204
	Waiau	280,529	2,437,327	1,029,024	891,937	874,549	1,340,570	2,224,738
	Kahe	1,971,211	788,343	1,494,111	1,258,286	294,342	1,299,902	2,385,896
		2,308,180	3,395,318	2,592,499	2,411,006	3,436,240	2,674,624	4,901,838
(ONLY OUTSIDE SERVICE)								
260	Maint Steam Turbo Eq-Prev							
	Honolulu	0	45,968	24,736	18,121	491,087	234	80,000
	Waiau	19,085	970,069	418,754	389,186	260,870	516,865	557,000
	Kahe	196,134	60,070	286,655	407,464	4,484	265,088	242,250
		215,219	1,076,107	730,145	814,771	756,441	782,187	879,250

Iowa Electric Company, Inc.
Select ABM Activities by Plant Site
1999-2004 Actual and 2005 Budget

Act	Act Description	1999	2000	2001	2002	2003	2004	Budget 2005
d) (IN RESPONSE TO CA-IR-296 AND CA-IR-640)								
(ALL COST CATEGORIES)								
262	Maint Steam Turbo Eq-Corr							
	Honolulu	216,625	240,390	239,139	208,303	1,682,003	320,305	368,231
	Waiau	1,015,756	1,650,735	1,271,386	1,683,771	1,178,723	1,404,781	1,177,962
	Kahe	1,749,729	1,703,475	1,873,521	1,958,524	1,695,287	2,336,320	1,679,944
		2,982,110	3,594,600	3,384,046	3,850,598	4,556,013	4,061,406	3,226,137
(ONLY OUTSIDE SERVICE)								
262	Maint Steam Turbo Eq-Corr							
	Honolulu	32,882	100,352	83,203	65,757	820,960	147,500	256,000
	Waiau	240,665	583,430	345,806	612,573	395,432	220,408	315,000
	Kahe	605,845	704,935	686,234	585,858	211,834	1,088,602	472,500
		879,392	1,388,717	1,115,243	1,264,188	1,428,226	1,456,510	1,043,500
e) (IN RESPONSE TO CA-IR-296)								
(ALL COST CATEGORIES)								
259	Maint Boiler Plt Eq-Corrective							
	Honolulu	278,400	474,369	479,931	538,795	1,615,880	501,702	590,295
	Waiau	2,680,480	2,646,297	2,035,968	1,918,081	1,604,981	2,724,241	3,529,520
	Kahe	2,737,417	2,873,070	2,998,884	3,238,759	3,272,694	3,877,700	3,720,045
		5,696,297	5,993,736	5,514,783	5,695,635	6,493,555	7,103,643	7,839,860
(ONLY MATERIALS)								
259	Maint Boiler Plt Eq-Corrective							
	Honolulu	49,320	126,202	154,415	161,446	545,136	86,427	195,790
	Waiau	737,593	884,814	749,233	591,431	322,922	926,654	498,991
	Kahe	753,412	748,971	878,356	1,602,117	1,593,307	1,118,844	1,238,181
		1,540,325	1,759,987	1,782,004	2,354,994	2,461,365	2,131,925	1,932,962
f) (IN RESPONSE TO CA-IR-296)								
(ALL COST CATEGORIES)								
258	Maint Boiler Plt Eq-Predictive							
	Honolulu	35,091	131,823	49,583	174,395	441,224	194,418	523,824
	Waiau	358,531	523,307	602,707	481,843	423,080	2,552,365	608,335
	Kahe	441,426	492,305	1,152,316	1,001,186	1,458,493	1,296,022	1,611,717
		835,048	1,147,435	1,804,606	1,657,424	2,322,797	4,042,805	2,743,876
(ONLY MATERIALS)								
258	Maint Boiler Plt Eq-Predictive							
	Honolulu	2,502	10,740	2,821	99,613	46,880	160,194	437,520
	Waiau	87,017	121,886	54,305	250,394	(49,806)	819,653	245,668
	Kahe	50,787	74,184	460,139	342,606	518,649	284,405	1,025,437
		140,306	206,810	517,265	692,613	515,723	1,264,252	1,708,625

Hawaiian Electric Company, Inc.
Select ABM Activities by Plant Site
1999-2004 Actual and 2005 Budget

Act	Act Description	1999	2000	2001	2002	2003	2004	Budget 2005
g) (IN RESPONSE TO CA-IR-296)								
(ALL COST CATEGORIES)								
878	Comply Solid & Hazard Waste Non-Oil							
	Honolulu	64,857	710,627	251,356	75,316	86,554	142,597	118,909
	Waiau	229,672	324,581	230,274	223,528	171,601	294,095	186,146
	Kahe	141,958	185,339	83,934	65,092	74,282	57,874	118,829
		436,487	1,220,547	565,564	363,936	332,437	494,566	423,884
(ONLY OUTSIDE SERVICES)								
878	Comply Solid & Hazard Waste Non-Oil							
	Honolulu	37,551	696,120	241,371	64,984	70,389	112,614	102,004
	Waiau	146,018	234,963	194,055	174,280	81,824	174,351	164,000
	Kahe	93,930	156,870	54,641	34,971	47,728	17,741	69,000
		277,499	1,087,953	490,067	274,235	199,941	304,706	335,004
a) (IN RESPONSE TO CA-IR-640)								
(ALL COST CATEGORIES)								
269	Maintain Fuel Feed Sys- Preventive (Maintenance)							
	Honolulu	4,679	0	0	25,085	4,252	0	0
	Waiau	0	193,013	0	369,811	613,301	19,017	32,007
	Kahe	0	0	0	0	0	1,989	210,000
	Waiau Comb Turb	0	87,401	24,038	0	0	0	0
		4,679	280,414	24,038	394,896	617,553	21,006	242,007
(ONLY OUTSIDE SERVICES)								
269	Maintain Fuel Feed Sys- Preventive (Maintenance)							
	Honolulu	0	0	0	25,085	1,300	0	0
	Waiau	0	189,856	0	354,896	536,354	1,200	0
	Kahe	0	0	0	0	0	0	210,000
	Waiau Comb Turb	0	83,433	21,893	0	0	0	0
		0	273,289	21,893	379,981	537,654	1,200	210,000
d) (IN RESPONSE TO CA-IR-640)								
(ALL COST CATEGORIES)								
877	Comply Sld& Haz Wste Oil-Related (Operations)							
	Honolulu	86,304	62,964	1,435,754	73,675	102,767	62,867	46,324
	Waiau	104,428	98,464	99,385	292,413	188,316	199,612	590,228
	Kahe	84,825	76,936	82,468	86,854	81,254	82,590	53,912
	Waiau Comb Turb	0	0	0	0	0	0	12,600
		275,557	238,364	1,617,607	452,942	372,337	345,069	703,064
(ONLY OUTSIDE SERVICES)								
877	Comply Sld& Haz Wste Oil-Related (Operations)							
	Honolulu	46,876	48,444	1,365,708	41,603	60,705	35,869	10,920
	Waiau	14,422	73,287	22,071	272,855	157,877	168,670	320,240
	Kahe	13,485	66,965	20,263	74,725	71,686	68,271	16,448
	Waiau Comb Turb	0	0	0	0	0	0	12,600
		74,783	188,696	1,408,042	389,183	290,268	272,810	360,208
Select Activities - Total								
		14,022,161	20,035,138	17,675,285	17,010,917	19,721,272	21,648,116	23,442,410
Select Activities - O/S								
		2,105,581	7,213,617	5,044,837	4,244,770	3,815,241	4,769,338	4,890,166
Select Activities - Material								
		1,680,631	1,966,797	2,299,269	3,047,607	2,977,088	3,396,177	3,641,587

Hawaiian Electric Company, Inc.
Select ABM Activities by Plant Site
1999-2004 Actual and 2005 Budget

<u>Act</u>	<u>Act Description</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>Budget</u> <u>2005</u>
Prod Maint - Total		17,797,879	24,377,251	22,521,089	24,880,145	24,879,004	30,170,449	31,003,585
Prod Maint - O/S		1,753,299	5,936,968	3,146,728	3,581,352	3,325,032	4,191,822	4,194,954
Prod Maint - Material		1,680,631	1,966,797	2,299,269	3,047,607	2,977,088	3,396,177	3,641,587
Prod Operation - Total		16,672,776	21,189,666	20,150,357	19,414,340	20,173,225	20,286,317	24,281,898
Prod Operation - O/S		352,282	1,276,649	1,898,109	663,418	490,209	577,516	695,212
Prod Operation - Material		0	0	0	0	0	0	0
Prod Oper & Maint - Total		34,470,655	45,566,917	42,671,447	44,294,486	45,052,229	50,456,766	55,285,483
Prod Oper & Maint - O/S		6,570,144	14,098,695	12,059,160	10,481,314	10,949,289	14,629,722	14,441,758
Prod Oper & Maint - Material		5,251,503	6,742,685	7,070,443	8,923,138	8,605,786	10,492,575	8,162,831

CA-IR-641

Ref: HECO T-6 Responses to CA-IR-1 and CA-IR-2.

To the extent HECO proposes any modifications or updates to its prefiled position regarding Production O&M expenses, please provide updated detailed documentation to replace each affected page of your response to these two information requests (including all revised labor hour and non-labor cost summaries, resource leveling sheets, forecast worksheets, project detail estimates, proposal documentation, etc.)

HECO Response:

HECO does not plan to change its prefiled position regarding Other Production O&M expenses except for the items noted in the "Listing and Description of Updates" provided to the parties and the Commission on May 5, 2005. See response to CA-IR-499. The revised items that impact Other Production O&M expenses include the following:

- Deletion of CHP operations and maintenance expenses as a result of the delay in HECO's proposed CHP program as identified in response to CA-IR-276, part b.
- Increase in production maintenance expense to reflect the change in betterment accounting, as agreed to by letter filed March 29, 2005, and as approved in Decision and Order No. 21738, filed April, 14, 2005, in Docket No. 03-0206 (see response to CA-IR-416)
- Revision for the inclusion of normalized expense for HECO-leased DG units at HECO substations (see response to CA-IR-441)
- Revision for the removal of Sun Power for Schools Non-Labor expenses (see response to CA-IR-186)

The test year budget impacts of the above updates are provided on pages 3 – 5. As noted in the May 5, 2005 updates filing, and in the response to CA-IR-499, HECO also is considering a possible adjustment to standard labor rates to reflect the difference in the percentage of overtime in actual 2003 labor costs (used as the basis for the standard labor rates) versus the percentage of

overtime hours in labor hours estimated for purposes of the 2005 test year. An additional adjustment reducing expense by \$100,452, is identified in the response to CA-IR-664. That is not to say that Other Production O&M expenses will not continue to increase in the future, due to the factors addressed at length in HECO T-6 and the responses to numerous information requests. Moreover, if revisions to individual expense items are proposed by other parties based on actual 2005 conditions (for example, some vacancies are still in the process of being filled as was indicated in response to CA-IR-48), HECO may propose revisions to other items (such as overhaul expenses) based on actual 2005 conditions (see response to CA-IR-43).

Hawaiian Electric Company, Inc.
2005 TEST YEAR

OTHER PRODUCTION OPERATIONS & MAINTENANCE EXPENSE (\$ Thousands)						
	(A)	(B)	(C)	(D)	(E)	(F)
	2005 TEST YEAR	CHP ADJ	BETTERMENT ADJ	DG ADJ	SUNPOWER ADJ	2005 TEST YEAR AS UPDATED
OTHER PROD OPERATIONS EXPENSE						
1 Labor	\$ 13,398	\$ -	\$ -	\$ -	\$ -	\$ 13,398
2 Non-Labor	\$ 10,479	\$ (62)	\$ -	\$ 98	\$ (75)	\$ 10,440
3 TOTAL	\$ 23,877	\$ (62)	\$ -	\$ 98	\$ (75)	\$ 23,838
OTHER PROD MAINTENANCE EXPENSE						
4 Labor	\$ 12,372	\$ -	\$ -	\$ -	\$ -	\$ 12,372
5 Non-Labor	\$ 18,792	\$ (157)	\$ 490	\$ 1,305	\$ -	\$ 20,430
6 TOTAL	\$ 31,164	\$ (157)	\$ 490	\$ 1,305	\$ -	\$ 32,802
7 TOTAL PRODUCTION O&M EXPENSE	\$ 55,041	\$ (219)	\$ 490	\$ 1,403	\$ (75)	\$ 56,640

Reference/Source:

Column (A) - HECO 615 - 2005 Test Year as Filed
Column (B) - HECO 616 - Other Prod O&M Expense Adjustment
Column (C) - See page 3 for details
Column (D) - See page 4 for details
Column (E) - CA-IR-2, HECO T-6, Attachment 3L.

Hawaiian Electric Company, Inc.
Rate Case - Test Year 2005
2005 Projects Subject to Betterment Accounting

<u>*Project #</u>	<u>Project</u>	<u>As Revised -----</u>		
		<u>Cap Portion</u>	<u>Exp Portion</u>	<u>Total</u>
P0000299	W9 Compressor Blade Coating	117,015.00	205,667.32	322,682.32
P0000300	W10 Compr Blade Coating	122,791.00	199,186.00	321,977.00
P0000641	K6 AEH Limit Switch Upgrd	9,000.00	85,346.75	94,346.75
TOTAL		<u>248,806.00</u>	<u>490,200.07</u>	<u>739,006.07</u>

NOTE: Project total cost is slightly different from totals shown in CA-IR-416 due to the update of the plant addition as presented in the HECO 2005 Test Year Rate Case-Update, dated 5/5/05, for plant additions on Attachment 6, pages 2-4. Also, not included in the revised expense portion is cost associated with AFUDC which is calculated only on capital construction projects.

Hawaiian Electric Company, Inc.

Rate Case - Test Year 2005

Breakdown of Distributed Generation Other Production O&M Cost

<u>Cost Item</u>	<u>Cost</u>	
Phone Line Lease	22,700	
Unit Monitor & Coord	21,600	
Site Security & Escort	7,200	
Annual Source Test	45,000	
Non-Cov Source Air Per Fee	1,500	
	<u>98,000</u>	Operation-Non-Labor
DG Unit Rental	<u>1,305,000</u>	Maintenance-Non-Labor
Total	<u>1,403,000</u>	Agrees with HECO 2005 Test Year Rate Case - Updates, Attach 1A, Pg.6

CA-IR-642

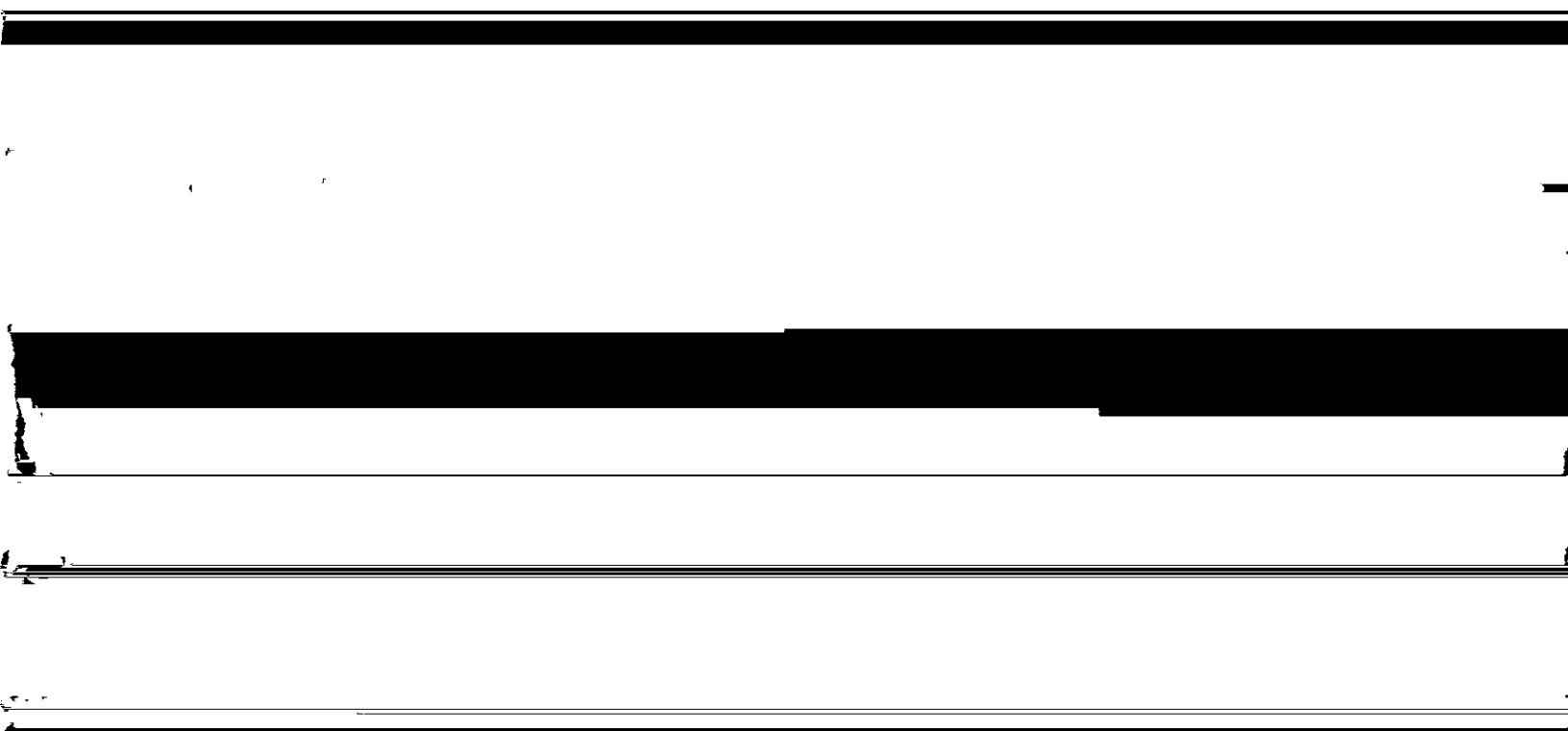
Ref: HECO T-6 Responses to CA-IR-2, HECO T-6, Attachment 4B.

For each production overhaul with expenses included in the Company's revised/updated filing (if not revised, respond for projects P844, P845, P846 and P847), please provide the following information:

- a. A copy of the outage work plan, including a detailed statement of the scope of work planned, including reference to each known major work element as well as each contingent budgeted work element that is subject to condition assessments to be made during the overhaul.
- b. A detailed statement of the budgeted labor hours by RA and by activity in each month for each outage in part (a).
- c. A detailed itemization of each significant budgeted non-labor charge by RA, activity and cost element for in each month for each outage in part (a).
- d. A complete copy of the outage report associated with the most recently completed previous unit outage corresponding with each test year planned overhaul project (K1, K4, K6, W4 if not updated).
- e. A detailed itemization of the actual labor hours and non-labor charges by RA, activity and cost element (comparable to the response to parts (b) and (c), above) in each month for the most recently completed previous overhaul identified in response to part (d)

repairs may take 10 weeks or more. Turbine and generator overhauls also vary depending on the type of unit. For example the General Electric steam turbines are designed to remove the total turbine (high pressure, intermediate pressure and low pressure) whereas the Westinghouse turbines are designed to allow overhauls by section. Capital projects such as controls upgrades also factor into the duration of planned outages.

Based on the 1/12/04 overhaul schedule provided in HECO-627, and the requested projects that include Kahe 6, Kahe 4, Kahe 1 and Waiau 4, a comparison of these projects



with the most recently completed previous projects is provided on pages 4-5. Comparisons are made for Kahe 6, Kahe 4 and Kahe 1. Waiau 4 could not be compared as the last recorded outage was in 1995, prior to the new activity based cost structure. Also provided are comparisons with the 2005 overhaul schedule revisions provided in CA-IR-43 that

- d. A copy of the most recently completed overhaul report for Kahe 6, Kahe 4, and Kahe 1 can be found in the 2002 – 2003 overhaul summaries in CA-IR-129. Waiau 4's last overhaul was conducted in 1995, when service hours were low due to adequate reserve margins, and included a boiler overhaul and adjustment of the turbine governor valves. Since then, only short maintenance outages to perform required boiler inspections were conducted every 3 years to comply with boiler operating permit requirements.
- e. Please refer to the project comparisons provided on pages 4 – 5.
- f. While the differences in overhaul scope and cost for Kahe 6, Kahe 4, and Kahe 1, can be obtained by comparing the capital and O&M list and associated cost provided in CA-IR-43 with the overhaul summaries in CA-IR-129, and the cost comparisons on pages 4 – 5, the resulting comparisons do not provide meaningful information due to the wide variations in scope. What is meaningful is to compare the planned scope and cost for each overhaul to the actual and obtain the benefits of lessons learned and impacts (i.e., scope and cost) on future overhaul planning for each respective unit. Please refer to CA-IR-499 regarding “normal” variations in the maintenance overhaul schedule.
- g. The electronic file of “2005 NonLabor OH Budget.xls” based on the 1/12/04 Planned Outage schedule is provided as part of the CA-IR-2, HECO T-6, electronic file submittal.

Hawaiian Electric Company, Inc.					
Rate Case - Test Year					
Overhaul Cost Comparison					
			1/12/04 Sch	2/3/05 Sch	Rev 4/05 Sch
	<u>RA</u>	<u>Previous Yr</u>	<u>2005 TY</u>	<u>2005 Proj</u>	<u>2005 Proj</u>
Kahe 6 Overhaul (2002 vs. 2005)					
		<u>(P0000250)</u>	<u>(P0000844)</u>	<u>(P0000844)</u>	<u>(P0000844)</u>
Labor-----					
	PBT	125	-	-	-
	PDD	1,257	-	-	-
	PDF	93	-	-	-
	PIE	23,372	-	-	-
	PIK	2,544	-	-	-
	PIL	64,459	-	-	-
	PIM	1,148	-	-	-
	PIN	29	-	-	-
	PIP	63,776	-	-	-
	PIT	843,023	803,885	803,900	803,900
	PIX	3,665	-	-	-
	PRS	720	-	-	-
	PRX	129	-	-	-
Total Labor		1,004,340	803,885	803,900	803,900
Material		1,159,617	1,040,749	1,058,600	1,058,600
O/S Serv		982,288	507,000	511,900	511,900
Overhead		410,812	539,194	564,500	564,500
Total		3,557,057	2,890,828	2,938,900	2,938,900
Kahe 4 Overhaul (2003 & 2004 vs. 2005)					
		<u>(P0000655)</u>	<u>(P0000845)</u>	<u>(P0000845)</u>	<u>(P0000845)</u>
Labor-----					
	PDF	238	-	-	-
	PDJ	550	-	-	-
	PDL	139	-	-	-
	PIK	18,765	-	-	-
	PIL	38,515	-	-	-
	PIM	2,009	-	-	-
	PIN	890	-	-	-
	PIP	36,167	-	-	-
	PIT	542,429	1,149,858	-	-
	PIX	2,240	-	-	-
	PYE	3,954	-	-	-
	PYM	122	-	-	-
Total Labor		646,018	1,149,858	0	0
Material		816,548	963,419	0	0
O/S Serv		592,398	665,000	0	0
Overhead		441,596	771,409	0	0
Total		2,496,560	3,549,686	0	0

Hawaiian Electric Company, Inc.					
Rate Case - Test Year					
Overhaul Cost Comparison					
			1/12/04 Sch	2/3/05 Sch	Rev 4/05 Sch
	RA	Previous Yr	2005 TY	2005 Proj	2005 Proj
Kahe 1 Overhaul (2001 and 2002 vs. 2005)					
		(P0000251)	(P0000846)	(P0000846)	(P0000846)
Labor-----					
	PIB	1,483	-	-	-
	PIE	12,437	-	-	-
	PIK	18,128	-	-	-
	PIL	35,749	-	-	-
	PIM	697	-	-	-
	PIN	6,826	-	-	-
	PIP	25,204	-	-	-
	PIT	584,457	552,826	-	-
	PIX	2,091	-	-	-
	PJC	828	-	-	-
	PJW	271	-	-	-
	PYM	151	-	-	-
Total Labor		688,322	552,826	0	0
Material		556,604	633,857	0	0
O/S Serv		463,098	351,000	0	0
Overhead		342,105	371,007	0	0
Transport		12,111	0	0	0
Total		2,062,240	1,908,690	0	0
Waiau 4 Overhaul (2005)					
		(Not Avail)	(P0000847)	(P0000847)	(P0000847)
Labor-----					
	PIT	(Not Avail)	1,016,020	862,200	862,200
Material		(Not Avail)	741,267	743,500	743,500
O/S Serv		(Not Avail)	1,278,000	1,566,300	1,566,300
Overhead		(Not Avail)	681,631	603,600	603,600
Total		(Not Avail)	3,716,918	3,775,600	3,775,600

CA-IR-643

Ref: HECO Response to CA-IR-183.

Please provide the following information regarding HECO's submission to the Department of Health CAB regarding 2004 Emission Fees payable in 2005:

- a. The actual amount of calculated fees by generating station.
- b. The CPI adjustment factor used to determine the amounts in part a, as required by HAR 11-60.1-114(j).

HECO Response:

- a. Emission fees payable by HECO to the Department of Health CAB for 2004 operations were as follows:
 1. Kahe - \$476,070.14
 2. Waiau - \$313,648.65
 3. Honolulu - \$51,825.62
- b. The CPI adjustment factor provided by the Department of Health was 1.022.

CA-IR-644

Ref: HECO Response to CA-IR-48.

Reference is made in part (a) indicating that the added night shift maintenance crew is needed to “accomplish maintenance on operating and available units” and that key resources must be increased to “handle the higher levels of work.” However, in response to part (d) HECO states:

“It is not possible to reconcile the increased maintenance staffing forecasted in 2005 because the maintenance staffing levels forecasted were based on the numbers of specific trades and craft personnel required to keep up with anticipated increased workload requirements.” The Company

repeatedly refers to increased volumes of work, yet appears to have no statistical measures of work requirements or backlog of work requirements. Please respond to the following:

- a. Given the absence of any studies of optimal staffing plans (part (a) response), was the judgment of management the sole determinant of numbers of personnel to be added?
- b. If the response to part (a) is not an unqualified “yes”, provide complete copies of all studies.

part a.2., the crew size of 10 was based on the minimum crew size required to cover all trades and crafts skills necessary to accomplish maintenance on operating baseload and available cycling units.

With regard to increasing staff to address work in CA IR 48, the following information is provided:

expected as crews work through holidays, weekends and extended hours to accomplish their work. Forced outages are also expected to increase requiring more callouts and “work to completion” situations.

- d. Pleaser refer to CA-IR-28 (EAF), CA-IR-30 (EFOR), CA-IR-37 (1995-2004 O&M), CA-IR-41 (2003 Planned vs Actual), CA-IR-42 (2004 Planned vs Actual), CA-IR-43 Revised (2005 Revised), CA-IR-45 (2002 – 2005 Cost by Category), CA-IR-172 (Overtime by RA), and CA-IR-634 (Prod. Maint. Labor Hrs).
- e. Both staffing levels information and work requirement information are combined to determine the forecast. Staffing level information provides available labor supply in terms of productive man-hours (total hours less non-productive hours due to vacation, holiday and sick) while work requirement information based on projects (i.e., overhauls) and non-projects provides labor demands. Labor demands normally exceed labor supply. The difference is made up with a combination of overtime and contract services. This process is referred to as “resource leveling”.
- f. Please refer to response to CA-IR-45.

CA-IR-645

Ref: HECO Revised 4-21-2005 Response to CA-IR-43, page 6, Revised Overhaul O&M estimates.

Please provide the following information regarding the three iterations of overhaul schedule related O&M estimates for the test year dated 1/12/2004, 2/3/2005 and "Revised 4/05 Schedule" on the page 6 spreadsheet:

- a. Identify which of the three alternative test year production maintenance expense amounts (\$14.5 million, \$17.1 million, or \$18.2 million) for overhauls is the most indicative of normal, ongoing conditions.
- b. Provide complete copies of all studies, reports, analyses, workpapers and other information relied upon in determining your response to part (a).
- c. State which of the three amounts in part (a), or which other amount not stated therein, should be included within HECO's revenue requirement so as to base the revenue requirement upon the most representative estimated amount of ongoing, normalized production maintenance expenses.
- d. Provide a complete explanation and copies of any information relied upon your response to part (c), to the extent not already provided by HECO.

HECO Response:

- a. Please refer to the response to CA-IR-499.
- b. Please refer to a. above.
- c. Please refer to a. above.
- d. Please refer to a. above.

CA-IR-646

Ref: HECO Cost of Service Study Excel Model, Sheet "Page 3", development of Composite NCD D3 factor.

- a. Please explain the basis for this "composite" factor that appears to be derived as a simple average of the sum of diversified class demands (NCCP) and the class peak demands based upon load factors.
- b. Why is the averaging thought to be appropriate, in place of direct use of either the NCCP or class peak values?

HECO Response:

- a. The composite NCD allocation factor (D3) is based on the individual customers' non-coincident peaks and the class peaks and is used to allocate the distribution secondary lines and transformer demand-related costs. The determination of this demand allocator (D3) is the same as used in the embedded cost of service study filed in all prior Company rate cases, and approved by the Commission. The basis for using both the class peaks and the individual customers' non-coincident peaks is to recognize the customers' load levels as _____

well as the diversity of the customers' loads that are served by these facilities, in allocating demand-related portion of these facilities' costs. These facilities are sized and installed to meet localized loads, so that class peaks and the customers' non-coincident peaks are normally used to allocate these costs. This is based on the NARUC Electric Utility Cost Allocation Manual, January 1992, pages 96-97.

- b. Please see response to part a. above.

- a. Please provide the updated economic forecasts for Oahu provided by UHERO used as a basis for HECO's sales forecasts.
- b. Please provide the forecast revisions or alternative models updating HECO's June 2004 sales and peak forecast.

The information provided in this response is preliminary and has not been submitted to the normal short-term forecast process as of May 13, 2005. Preliminary results were technically reviewed by the Forecast Review Group on May 10, 2005. Members of this group were invited based on their technical expertise in forecasting and included the University of Hawaii College of Business, the Department of Business, Economic Development & Tourism, and the Department of Commerce and Consumer Affairs. The economic forecasts, models, and results are scheduled to be reviewed by HECO's Forecast Working Group on May 16, 2005. Review by HECO's Executive Staff is not expected to occur until after May 20, 2005 when the forecast

UHERO. The information is voluminous and therefore only one copy each will be provided to the Consumer Advocate, Department of Defense, and the Commission under separate transmittal. UHERO's projections will be provided electronically in MS Excel format on a CD in a folder labeled CA-IR-647 filed under separate transmittal.

- b. See attached pages 73 through 146. The information is voluminous and therefore only one copy each will be provided to the Consumer Advocate, Department of Defense, and the Commission under separate transmittal.

Due to the voluminous nature of the information, one copy (pages 3 to 146) will be provided to the Consumer Advocate, the Department of Defense and the Public Utilities Commission under separate transmittal.

CA-IR-648

Ref: Response to CA-IR-157(d.1.).

- a. Please provide the estimated kwh impact caused by the flood damage to UH Manoa facilities for November and December 2004.
- b. Please provide monthly kwh use for UH Manoa facilities for 2004 and the available months for 2005.

HECO Response:

- a. See attached page 2. The data is confidential customer information and will be provided under protective order once a protective order is issued. Decreases from the flood damage to UH Manoa was not included in the June 2004 sales update used for test year estimates (2004 use was projected to remain the same as 2003 levels then 2005 growth was added). The attached estimates were derived at the total customer usage level by comparing November and December 2003 to the same period in 2004. Other factors besides the flood damage may have caused decreases to the customer's usage during this time, but may be attributed to the flood damage in this derivation.
- b. See attached page 2. The data is confidential customer information and will be provided under protective order once a protective order is issued.

Confidential Information Deleted Pursuant
to Protective Order No. _____

CA-IR-648
DOCKET NO. 04-0113
PAGE 2 OF 2

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CA-IR-649

Ref: Response to CA-IR-157(a).

Please provide the January to March 2005 monthly billed kwh sales by commercial sectors.

HECO Response:

See attached page 2. Data is available at the GWh sales level.

Hawaiian Electric Company, Inc.

**BILLED GWHS BY BUILDING TYPE
2005**

<i>Building Type</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>
Offices	63.6	63.2	62.1
Restaurant	20.4	19.3	19.1
Retail (Non Food)	38.9	37.3	37.3
Grocery (Retail - Food)	17.0	16.5	16.6
Warehouse	10.3	10.1	11.6
Education	27.7	29.7	31.4
Health	18.3	17.8	17.8
Lodging (Hotels)	33.8	31.2	32.6
Housing (Apt/Condo)	36.0	34.3	33.6
Service/Amusement	29.1	28.5	28.7
Air Facilities	10.4	8.8	9.1
Manufacturing	14.6	10.5	9.2
Pumping (incl BWS)	15.5	14.6	15.2
Military/Base	104.9	91.0	95.2
Food Processing	5.3	5.3	5.3
Others	6.5	6.4	6.3
Grand Total	452.3	424.5	431.1

Note: Includes adjustments for no bills, prior year in current year, and other large adjustments to billed sales.

CA-IR-650

Ref: HECO response to CA-IR-187 (Ho'okina Award Program).

The referenced response provided program guidelines and other information regarding the Ho'okina Award Program. Please provide the following:

- a. The response to CA-IR-187(b) indicated that actual monthly program expenditures by NARAUC account are not available, as the expense is incurred when awards are distributed in the March timeframe. Please provide actual number of award recipients and expenditures under the program, by NARUC account, for plan years 2002, 2003 and 2004, which would have been expensed in March 2003, 2004 and 2005.
- b. Please identify and describe the key factors contributing to the introduction of this program in 2002, including a detailed description and quantification of any related benefits that would not have occurred in the absence of the program.
- c. Prior to 2002, did HECO/HEI have an award program similar to Ho'okina that is no longer

offered? Please explain.

- d. Please identify, describe and quantify all ratepayer benefits arising from this program that have been reflected in the 2005 test year forecast.

HECO Response:

- a. The actual number of award recipients and amounts awarded under the program by NARUC account for 2002, 2003 and 2004, is provided on page 2

by HECO employees in community service activities, community education on energy conservation and other energy alternatives, greater productivity in the workplace, and a demonstrable commitment to working safely, adhering to environmental regulations, and following HECO's work rules and business conduct.

Hawaiian Electric Company, Inc.
Rate Case - Test Year 2005
Hookina Awards

<u>Program Year</u>	<u># of Award Recipients</u>	<u>NARUC Account</u>	<u>\$\$ Distributed</u>
2002	173	506030	49,875
	74	566	17,850
	231	588	73,725
	333	921	113,475
	<u>811</u>		<u>254,925</u>
2003	121	506030	24,200
	44	566	8,800
	180	588	36,000
	309	921	61,800
	<u>654</u>		<u>130,800</u>
2004	123	506030	24,600
	40	566	8,000
	132	588	26,400
	351	921	70,200
	<u>646</u>		<u>129,200</u>

Award Program).

The response to CA-IR-187(c) indicates that the 2004-2005 Ho'okina estimate was based on a \$200 per employee award, resulting in a revised budget amount of \$288,000, allocated as set forth on CA-IR-2, HECO T-6, Attachment 3M, page 3. Please provide the following:

- a. Please confirm that the \$288,000 amount was based on \$200 for 1,440 employees. If this cannot be confirmed, please explain.
- b. Does HECO expect 1,440 employees, or about 76% of the 1,493 included in the 2005 test year forecast (see HECO-1612), to qualify for payments in 2005 or 2006? Please explain and provide any support for this assumption.

HECO Response:

- a. Yes, the budget amount was based on an estimated employee staffing count for 2005 at \$200 per employee.
- b. Yes, the budget assumption was based on a participation/qualification percentage of 80% of the total employees in 2005 or 2006. This assumption included a factor for increased participation.

CA-IR-652

Ref: HECO response to CA-IR-187 (Ho'omaika'i Award Program).

The referenced response, which provided program guidelines and other information regarding the Ho'okina Award Program, also identifies "Ho'omaika'i" – an employee recognition program. Please provide the following:

- a. Are Ho'omaika'i awards also distributed in the March timeframe for the prior plan year? If so, please provide actual number of award recipients and expenditures under the program, by NARUC account, for plan years 2002, 2003 and 2004, which would have been expensed in March 2003, 2004 and 2005.
- b. Please provide the Ho'omaika'i program expenditures included in the 2005 test year forecast, by NARUC account.
- c. Please identify and describe the key factors contributing to the introduction of this program in 2002, including a detailed description and quantification of any related benefits that would not have occurred in the absence of the program.
- d. Prior to 2002, did HECO/HEI have an award program similar to Ho'omaika'i that is no longer offered? Please explain.
- e. Please identify, describe and quantify all ratepayer benefits arising from this program that have been reflected in the 2005 test year forecast.

HECO Response:

- a. No. The Ho'omaika'i Awards is the name of the programs that encompass all the employee recognition programs for HECO (Po'okela Awards, Alaka'i Awards, Mahalo Awards, Ho'ola'a Awards, and the Ho'okina Awards). The Ho'okina Awards is the only awards program that is distributed in March of the following year.
- b. The 2005 forecasted expenditures are shown on page 3.
- c. The Ho'omaika'i Award Programs were introduced in 2000 to redesign our employee recognition program with the intent to better align employee and team contributions to support HECO's strategic direction. The awards program rewards those behaviors that support our core values and strategic focus. Each program has different goals and objectives

which are difficult to measure in quantitative terms. However, the one measurable benefit continues to be significant and sustained participation by employee participation in company approved community service projects.

- d. Yes, the Ho'omaika'i Awards Programs replaced the Employee Recognition Program called ACER, & the Employee Suggestion Program called ACES.
- e. The Ho'omaika'i Programs have different criteria, sponsorship, and awards which reward and acknowledge exceptional employee performance and contributions to the organization. Ratepayer benefits for the Ho'okina Award Program are addressed in the response to CA-IR-650. Ratepayer benefits for the Ho'ola'a (Service), Mahalo, and Alaka'i Award Programs are addressed in other testimonies and in other IR responses including HECO T-13, page 24, CA-IR-650, and CA-IR-654.

Hawaiian Electric Company, Inc.
Rate Case - Test Year 2005
Ho'omaika'i Awards (Including Ho'okina)
2005 Forecast

<u>Program</u>	<u>NARUC Account</u>	<u>Amount</u>
Ho'ola'a (Service) Awards	921	<u>38,000</u>
Mahalo & Alaka'i Awards	921	<u>27,000</u>
Ho'okina Awards	506030	80,640
	566	56,492
	588	56,492
	921	<u>94,376</u>
		<u>288,000</u>
Total		<u><u>353,000</u></u>

CA-IR-653

Ref: HECO-1310, page 4 (HEI Incentive Compensation).

Footnote (9) of HECO-1310 indicates that the 2003 base for the 2005 test year HEI forecast "...was adjusted to exclude costs related to incentive compensation. This adjustment was made to simplify the issues related to this rate case only." HECO-1310 reduced the Company's 2003 expense by about \$41,064 for incentive compensation. Please provide the following:

- a. Please identify and describe the various incentive programs offered by HEI and provide actual expenses associated with these programs in both 2003 and 2004.
- b. Referring to item (a) above, please reconcile the 2003 actual HEI incentive compensation costs with the \$41,064 HEI set forth on HECO-1310, explaining any material differences.

HECO Response:

1. Executive Incentive Compensation Plan (EICP). Annual incentive awards are granted upon the achievement of financial and nonfinancial performance measures established by the Compensation Committee of the HEI Board of Directors.
2. Long-Term Incentive Plan (LTIP). The LTIP is linked to the long-term financial performance of the Company and goals are based on achieving financial criteria

for extraordinary performance or contribution to the Company's objectives and significant achievement. This Plan only applies to HEI employees.

See page 3 for the actual expenses associated with these programs in 2003 and 2004. These expenses only relate to the incentive awards associated with these programs and do not relate to the cost to administer these programs for the HEI plan participants. (See response to b. below for administrative costs.)

- b. None of the 2003 actual HEI incentive compensation costs shown on page 3 are included in the \$41,064 set forth in HECO-1310. The labor rates have been adjusted to remove any incentive compensation expense and consequently no further adjustments are necessary. The \$41,064 instead represents time incurred by HEI to administer the incentive compensation plans on behalf of its subsidiaries and external expenses, including professional services related to the stock option registration statement and other professional services rendered in connection with the stock options, rather than the actual incentive awards associated with these programs. The actual cost to administer these programs for HEI personnel (as opposed to subsidiary personnel) is not available since that information is not tracked in the intercompany billing system.

HEI's Incentive Compensation Plans

	2003	2004
1. EICP	1,488	1,762
2. LTIP	862	1,188
3. Stock options and SARs	1,306	903
4. HEI Performance Bonus Plan	242	201

CA-IR-654

Ref: HECO-1304 & HECO-1310 (Incentive Compensation).

Both referenced exhibits exclude incentive compensation costs from the 2005 test year forecast. HECO T-13 (page 9) and HECO T-1 (page 26) indicate that incentive compensation costs have been eliminated from the test year in order to simplify and limit the issues. Please provide the following:

- a. Does HECO consider the Ho'okina or Ho'omaika'i awards to represent a form of incentive compensation? If not, please explain the distinction between these award programs and those identified on HECO-1304.
- b. Does HECO/HEI offer other employee award programs, similar to the Ho'okina or Ho'omaika'i programs, but not explicitly considered to a form of incentive compensation? If so, please provide the following for each such program:
 1. Identify and describe the program.
 2. Provide a copy of any program guidelines, instructions, qualifications and conditions.
 3. Provide actual program expenditures by NARUC account for the past three years.
 4. Provide the amount of the program expenditures included in the 2005 test year forecast
- c. Referring to items (a) and (b) above, do the incentive compensation adjustments on HECO-1304 or HECO-1310 have the effect of excluding any portion of the identified awards from the 2005 test year forecast? If so, please provide the amount thereof and a pinpoint reference to any documentation supporting said exclusion. If not, why not?
- d. Please identify, describe and quantify all ratepayer benefits arising from each identified program that has been reflected in the 2005 test year forecast.

HECO Response:

- a. The Ho'okina award is not considered incentive compensation. Unlike, incentive compensation, the objective of the Ho'okina award is not tied strictly to income and earnings. While financial earnings goals must be met before the Ho'okina award is given, the objective of the award is to support the Company's business objectives of developing

awards are included in the \$343,000 of Admin & Genl – Other Awards in account 921 on HECO-1304 which were removed from the Test Year 2005 estimate.

- b. No.
- c. As stated in part a above, the Ho'omaika'i awards are included on HECO-1304. However, the Ho'okina award is not excluded from the Test Year 2005 estimate since it is not considered incentive compensation.
- d. The Ho'okina program results in the following benefits to the ratepayers:
 - Lower costs due to reduced workplace injuries, accidents, infractions
 - Improved customer service
 - Improved relationship between the Company and the community

CA-IR-655

Ref: HECO response to CA-IR-82 (Software Development Costs).

The referenced interrogatory specifically referred to computer software development costs included within the 2005 test year, as opposed to recurring maintenance or right-to-use fees. Please provide the following:

- a. Please confirm that the major software costs provided in response to CA-IR-82(b) are development costs.
- b. Define "development" as used in this context.
- c. Regarding the Electric Facilities Management Systems (EFMS) Program costs, please provide the following:
 1. Please provide the dates on which the project was started and completed.
 2. Please provide the total actual cost of this program, showing expenditures by month.
 3. What is the expected life cycle of the EFMS program and subprojects?
 4. Did HECO capitalize any of the cost of the EFMS project? If so, please provide the total amount, showing the calculation of the net amount included in rate base and any amortization included in operating expense during the 2005 test year. If not, why not?
 5. Does HECO expect to incur \$610,000 of EFMS program development costs on an annually recurring basis? Please explain.
- d. Regarding the E-Business (EBus) Program costs, please provide the following:
 1. Please provide the dates on which the project was started and completed.
 2. Please provide the total actual cost of this program, showing expenditures by month.
 3. What is the expected life cycle of the EBus program and subprojects?
 4. Referring to HECO T-13, p. 49, did HECO capitalize any of the cost of the EBus project other than the \$670,000 deferred in November 2000? If so, please provide the total amount, showing the calculation of the net amount included in rate base and any related amortization included in the 2005 test year. If not, why not?
 5. Does HECO expect to incur \$510,000 of EBus program development costs on an annually recurring basis? Please explain.

HECO Response:

- a. Yes the major software costs provided in response to CA-IR-82(b) are development costs.
- b. Development means new applications or upgrades to existing applications. This is contrasted from “maintenance or recurring licensing” costs which were not included.
- c. 1. Project start and completion dates of 2005 EFMS Subprojects are included in the table below:

EFMS Subproject	Start date	End Date
AM/FM Asset Management Phase 2	1Q 2005	4Q 2005
Substation Facilities & Drawing Imaging	2007	2007
Underground Cable Inspection & Analysis	1Q 2005	4Q 2005

2. There are no accumulated costs thus far in 2005. EFMS expenditures will be recorded in the 3rd and 4th quarters as 2005 EFMS projects are completed.
 3. There is no expected lifecycle. EFMS projects lifecycles depend on technology and work process changes.
 4. No. EFMS costs are software costs not subject to capitalization. They are treated as period expenses. This is in accordance with the Company's accounting policy on computer software development costs (provided as HECO-1316), which states: "Project costs totaling less than \$250,000 should be charged as incurred to the appropriate functional operation and maintenance (O&M) expense account or clearing account, based on the benefiting organization."
 5. Yes. EFMS development and modifications are expected to continue as work requirements require modifications.
- d. 1. Project start and completion dates of 2005 E-Business Subprojects are included in the table below:

EBUS Subproject	Start date	End Date
Check Free i-Series Upgrade	Feb 05	Jul 05
eGain e-mail application replacement	Sep 05	Dec 05
Vignette Dynamic Portal	Dec 05	Jan 06
Installation and Configuration Services	Sep 05	Sep 06

2. Total Actual Costs of E-Business software development subprojects included in the 2005 test year estimate are included in the table below:

EBUS Subproject	4Q '04 (Note)	Jan 05	Feb 05	Mar 05	Apr 05	Total
Check Free i-Series Upgrade	\$170,400	\$0	\$0	\$0	\$0	\$170,400
eGain e-mail application replacement	\$141,926	\$0	\$0	\$0	\$0	\$141,926
Vignette Dynamic Portal	\$35,438	\$0	\$0	\$0	\$0	\$35,438
Installation and Configuration Services	\$174,686	\$0	\$0	\$0	\$0	\$174,686

Note: Some of the 2005 Budgeted EBUS subprojects were expensed in the 4th quarter 2004, based on the software delivery date.

3. The eBusiness program is an ongoing program. It includes a number of tools, applications, and subprograms. Lifecycles for particular programs can vary depending on new technology that makes an existing tool obsolete, "orphaning" of discontinued support for older versions of software, etc. For example, Vignette has announced the end of life support for its V6 product line. HECO has already begun planning to migrate its

HECO.com platform from V6 to VAP and V7. A similar situation exists with eGain (customer e-mail support) where this 5-year old program lacks the functionality of its planned replacement Dialog and Messenger.

4. No. E-Business costs are software costs not subject to capitalization. They are treated as period expenses. This is in accordance with the Company's accounting policy on computer software development costs (provided as HECO-1316), which states: "Project costs totaling less than \$250,000 should be charged as incurred to the appropriate functional operation and maintenance (O&M) expense account or clearing account, based on the benefiting organization."

5. Future years EBUS Program budgets are currently set at (with recurring Maintenance portion estimated at \$250,000):

Year	EBUS Budget
2007	\$521,000
2008	\$521,000
2009	\$521,000

CA-IR-656

Ref: HECO response to CA-IR-78 (Customer Service – 2004 Reorganization).

The referenced response indicates that the O&M impact of the reorganization is \$307,313 (excluding on-costs). The reorganization also results in the following changes: (a) “the Vice President, Customer Solutions [a new position] has the resources to actively pursue the Company strategy of presenting the customer with more choices related to energy options and optimum energy usage;” (b) “the Manager, Energy Services, is now concentrating his efforts on new DSM programs proposed in this rate case...”; and (c) an additional DSM Engineer position that was filled December 2004, which was transferred from the Customer Installation Department due to the increased emphasis on DSM measures. Please provide the following:

- a. Does the above summary reasonably describe the reorganization? If not, please explain.
- b. Based on the response to item (a) above, would it be accurate to describe the need for the reorganization and the incurrence of the added O&M costs on the increased focus on DSM?

If not, please explain.

- c. Commission issued Order No. 21698 on March 16, 2005, which separated HECO’s DSM and load management requests from the rate case and opened Docket No. 05-0069 to consider those issues. CA-IR-533 (currently outstanding) requested a quantification of the adjustments required to remove DSM and load management costs, revenues and/or investments from HECO’s 2005 test year forecast. Should the \$307,313 (excluding on-costs) be included in costs removed from the test year? If not, why not?

HECO Response:

- a. Yes.
- b. It would not be entirely accurate to portray the need for the reorganization on the increased focus on DSM. For example, one aspect of the reorganization was to include the Integrated Resource Planning Division in the new Customer Solutions process area. For another, the Manager, Energy Services Department continues to be responsible not only for DSM, but also for the Pricing Division, which is responsible for rate design, tariff administration, and

Management related.

Neither would it be entirely accurate to portray the increase in test year O&M expense as the result of an increased focus on DSM. While the net increase of \$307,313 does reflect the addition of a DSM Engineer, it also reflects the addition of a Vice President, Customer Solutions, an Executive Secretary, the addition of a Planning Analyst in the Forecasts and Research Division, and the elimination of the Director, Forecasts Division.

- c. No, the \$307,313 should not be placed into the Energy Efficiency Docket, Docket No. 05-0069, or removed from the test year. As indicated above, this change in test year O&M expenses reflects other than DSM-related costs. In its April 29, 2005 letter the Company indicated that its list of changes to certain revenue requirements inputs would include certain costs for HECO's existing energy efficiency and load management DSM programs to be included in base rates. The list of changes was filed on May 5, 2005.

CA-IR-657

Ref: HECO responses to CA-IR-71 & CA-IR-508 (Staffing).

Please provide the monthly employee counts supporting the actual 2004 average of 1,334.

HECO Response:

Monthly employee counts supporting the actual 2004 average were as follows:

December 2003	1,291
<u>2004</u>	
January	1,289
February	1,289
March	1,293
April	1,303
May	1,311
June	1,336
July	1,348
August	1,363
September	1,370
October	1,383
November	1,398
December	1,416

Note: Numbers do not compute exactly due to rounding.

CA-IR-658

Ref: HECO responses to CA-IR-261, CA-IR-263 & HECO-1604 (Ellipse Fees).

Please provide the following:

- a. The invoices attached to CA-IR-261 appear to only support two of the three Ellipse cost elements (buy-down fee & BSI tax) set forth on HECO-1604, p. 16. Please provide a copy of the January 2005 invoice for the recurring maintenance fee.
- b. CA-IR-263(c) indicates that the software maintenance fee reduction was effective June 2004. Beginning in June 2004, did HECO actually record the lower maintenance fee in operating expense or did the Company defer that expense reduction as an offset to the \$1.1 million fee recorded as a prepaid expense (HECO T-16, p. 15)? Please explain.
- c. Did HECO record the entire \$1.1 million as a prepaid expense in June 2004 or only the \$550,000 installment paid in June 2004? If \$1.1 million, please explain why the full amount was recorded as a prepaid expense.
- d. Referring to HECO T-16, p. 15, did HECO actually commence the amortization of the \$1.1 million fee, over 24 months, beginning June 2004? If not, please explain.
- e. Referring to item (b) above, please provide the actual monthly balance for the prepaid expense account beginning in June 2004 through the most current month available.

HECO Response:

- a. There was no invoice paid in January 2005 since the maintenance period covered June 1, 2004 to May 31, 2005. A copy of the invoice to be paid in May 2005 is provided on pages 3 and 4. As stipulated in the maintenance agreement, this invoice reflects an escalation in the maintenance fee for the 3.3% increase in the Consumer Price Index.
- b. Beginning in June 2004, HECO amortized their proportionate share of the lower maintenance fee over the coverage period of June 1, 2004 to May 31, 2005 and the \$1.1 million fee over the two-year payback period.
- c. HECO did not record the entire \$1.1 million as a prepaid expense in June 2004; only the \$550,000 paid in June 2004 was recorded as a prepaid expense in June 2004.

- d. HECO commenced amortization of the \$1.1 million fee over 24 months, beginning June 2004.
- e. The actual monthly balance for the prepaid expense account from June 2004 through April 2005 was as follows:

June 2004	\$498,599.71
July 2004	\$452,105.28
Aug. 2004	\$406,466.58
Sept. 2004	\$360,827.87
Oct. 2004	\$315,189.16
Nov. 2004	\$269,550.45
Dec. 2004	\$635,393.95
Jan. 2005	\$589,740.95
Feb. 2005	\$544,087.95
Mar. 2005	\$498,434.95
Apr. 2005	\$452,781.95

INVOICE

APR CVD MAY 23 '05 AM 10:34



Mincom

9635 MAROON CIRCLE
SUITE 100
ENGLEWOOD CO 80112
303-446-9000
303-446-8664

HAWAIIAN ELECTRIC COMPANY, INC
ATTN: ACCOUNTS PAYABLE
PO BOX 2750
HONOLULU HI 96840-0001

Cust. No. HWE01
INVOICE I0007801
Date 05/20/05
Ref.

Description	Amount
ELECTRIC MAINTENANCE FEES	

INVOICE



9635 MAROON CIRCLE
SUITE 100
ENGLEWOOD CO 80112
303-446-9000
303-446-8664

HAWAIIAN ELECTRIC COMPANY, INC
ATTN: ACCOUNTS PAYABLE
PO BOX 2750
HONOLULU HI 96840-0001

Cust. No. HWE01
INVOICE I0007801
Date 05/20/05
Ref.

Description	Amount
-------------	--------

CA-IR-659

Ref: HECO responses to CA-IR-62 & CA-IR-69, 248 (Vegetation Management).

In discussing the increase in distribution O&M between 2003 and 2005, the response to CA-IR-62(a) referred to the Company's need to address increased vegetation growth in the PJMCO's

facilities in 2004 due to excessive rainfall. In response to CA-IR-69, HECO provided a comparison of actual tree/brush trimming expense for 2000-2004 actual and 2005 test year forecast. Please provide the following:

- a. Does the response to CA-IR-69 include the cost of internal Company resources as well as

increase from the previous recorded data. For 2003, 22 out of the 25 (88%), locations for which data comparison is available shows an increase in rainfall. Although rainfall in 2003 was higher than that for 2000 – 2002, which was a relatively dry period, it was still less than the Norm and, therefore, not considered “excessive”.

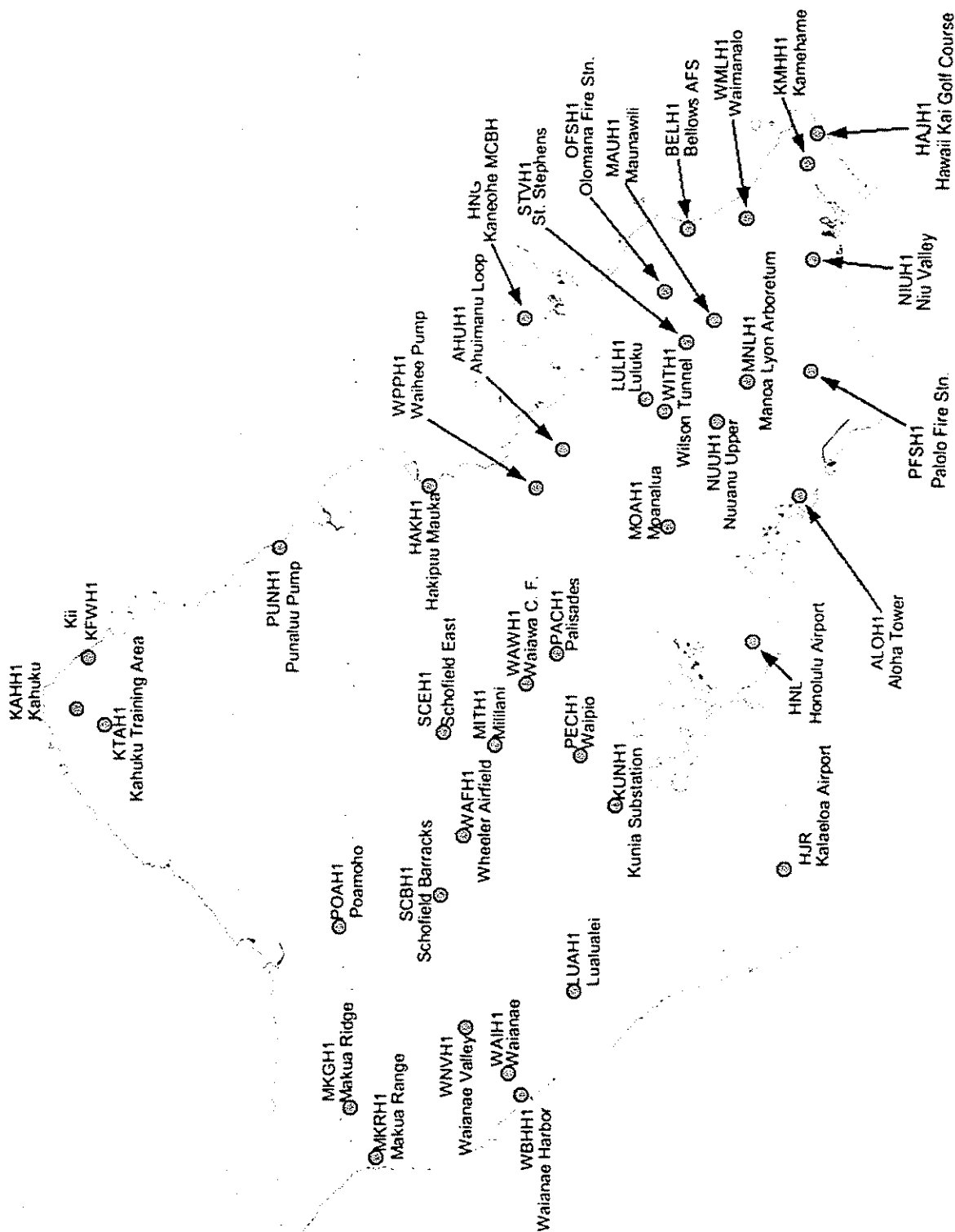
- c. Referring to Attachment A, for 2004, 28 out of the 28 (100%) locations for which data comparison is available show an increase in rainfall. In addition in almost every case, the 2004 recorded rainfall exceeds the Norm for that location. The Norm is based on historical averages tracked by NOAA NWS Honolulu Forecast Office. HECO’s test year forecast was not derived assuming the “excessive” (i.e., above the norm), rainfall in 2004 would continue in 2005. See response to CA-IR-606 as to how the 2005 budget amount was set.

Vegetative growth is influenced by a number of different factors, including site quality and the availability of resources. The primary limiting resources to the growth of plants include water and nutrients. Because of this basic relationship of plants to their

environment, there exists a direct correlation between the rate at which plants will grow and

of required removal work. Thirdly, it results in an increase in the number of individual plants requiring vegetation management.

NOAA NWS Rain Gauge Monitoring Sites



ANNUAL RAIN GAUGE DATA
(NOAA NWS Honolulu Forecast Office)

* Recorded Data in Inches

		2000		2001		2002		2003		2004	
<u>Location</u>	<u>Norm</u>	<u>Rec*</u>	<u>%</u> <u>Norm</u>	<u>Rec*</u>	<u>%</u> <u>Norm</u>	<u>Rec*</u>	<u>%</u> <u>Norm</u>	<u>Rec*</u>	<u>%</u> <u>Norm</u>	<u>Rec*</u>	<u>%</u> <u>Norm</u>
Hnl Ap	22.00	7.11	32	9.16	42	12.19	66	12.67	69	39.02	212
Waianae	20.00	3.47	17	8.55	43	14.59	73	12.26	61	37.97	190
Makua Rdg	43.40									74.20	171
Hawaii Kai	28.00	10.95	39	11.33	40	21.70	78	25.48	91	46.74	167
Lualualei	25.00	9.62	38			17.77	71	24.85	99	39.83	159
Palolo Fs	40.00	24.59	61	25.90	65	24.27	61	26.85	67	62.59	156
Waimanalo	50.00	19.46	39			23.73	55	32.62	76	65.95	154
Waipio	30.00	16.17	54	17.83	59	21.07	70			45.75	153
Luluku	80.00	56.84	71	53.79	67	71.55	89	91.22	114	119.69	150
Schofield E	74.60									111.38	149
Waianae BH	21.00									30.33	144
Mililani	45.00	27.10	60	31.51	70	36.13	80	42.01	93	62.22	138
Kunia Sub	28.00	10.90	39	9.81	35	15.05	54	20.98	75	38.07	136
Wilson Tunnel	110.00	89.87	82			107.63	98	120.43	109	147.05	134

PAGE 3 OF 3

ANNUAL RAIN GAUGE DATA
(NOAA NWS Honolulu Forecast Office)

* Recorded Data in Inches

<u>Location</u>	<u>Norm</u>	<u>2000</u>		<u>2001</u>		<u>2002</u>		<u>2003</u>		<u>2004</u>	
		<u>Rec*</u>	<u>% Norm</u>	<u>Rec*</u>	<u>% Norm</u>	<u>Rec*</u>	<u>% Norm</u>	<u>Rec*</u>	<u>% Norm</u>	<u>Rec*</u>	<u>% Norm</u>
Palisades	75.00	42.25	56	51.65	69	48.36	64	54.24	72	81.56	109
Poamoho	45.00					24.78	55	29.23	65	48.66	108
Ahuimanu	100.00					75.19	75	92.16	92	106.71	107
Nuuanu Ws	130.00							101.91	78	138.94	107
Moanalua	80.00	41.04	51	50.18	63	39.76	50	46.01	58	79.70	100
Waihee P	115.00	50.40	44			80.51	70	98.57	86	105.80	94
Kaneohe M.	39.90							18.07	45	31.27	78
Kalaeloa	18.30							13.14	72		
Schofield B	41.80							37.32	89		
Makua Ran	33.90							20.43	60		
Waialua	33.80	12.48	37	13.21	39	21.33	71				
Kii	41.00										
Niu Valley	40.00	22.90	57			32.17	80	36.84	92		

Note: These are provisional uncertified data and are to be used for informational purposes only.

The referenced response indicates that the 2005 test year rate base forecast does not include any capital or deferred costs for the CIS replacement project (P0000571), because it is forecasted to be completed after the test year. However, \$251,000 of CIS O&M costs (\$240,000 fixed

- a. Please provide the current planned operational date for the new CIS system.
- b. Please confirm that the \$251,000 of CIS O&M expense is associated with the new CIS system. If this cannot be confirmed, please explain.
- c. Referring to items (a) and (b) above, please explain why HECO believes it is appropriate to include any operating expense associated with the CIS project in the test year forecast, when the project is not expected to be completed until after the test year.

replacement project) began in 2005. See Attachment 1 worksheets for Project #P0000571

General Informational Requests.

- d. Although the Company expects to benefit from the increased functionality available through the implementation of a new CIS, the Company is not projecting cost savings through a reduction in labor hours and labor dollars. The employees currently engaged in manual processing due to the functional deficiencies of the current CIS will be required to assist with the transition to the new CIS and then will be required to perform additional functions created by the new CIS. These functions include, but are not limited to, validation of system results, manually resolving exceptions, creating and analyzing reports and managing and maintaining system parameters. See Docket No. 04-0268, responses to CA-IR-10 and CA-SIR-8.
- e. Referring to response (d) above, HECO has not removed any avoidable labor and non-labor costs from the 2005 test year forecast.

CA-IR-2
DOCKET NO. 04-0113
PROJECT NO. P0000571
PAGE 1 OF 2

CA-IR-2

PROJECT P0000571 CIS Replacement

General Information Requests

For each of the HECO witnesses who sponsor test period budgeted non-labor direct expense amounts, please provide the following information:

- a. Identify each employee involved in preparation of budgeted non-labor direct expense amounts included in the rate case test period budget and sponsored by the witness.
- b. Provide complete copies of all calculations, spreadsheet files, "pencil" workpapers, surveys and other analyses performed by each of the employees identified in response to part (a), indicating the amounts by Department, RA, Activity and NARUC Account that such calculations support.

c. For each budgeted non-labor amount in the test period, provide a breakdown of the amount by Department, RA, Activity and NARUC Account.

Lori Oishi & Lynn Bronaugh, HECO Customer Service; Brenda Deryke & Ramona Hamasu, Information Technology.

- b. See Attachment 1 worksheets for Project #P0000571 Expense Element #451, ITS Labor Hours and \$, to support \$50,563.20 cost allocation to HECO (RA=PEZ, Activity=600, NARUC=921); and Expense Element #501, Outside Services Labor Hours and \$, to support \$167,353.20 cost allocation to HECO (RA=PCA, Activity=600, NARUC=903.) These cost estimates are used in the CIS Application to the PUC and assume a project start date of January 1, 2005. These cost estimates have been provided under Protective Order No. 21444 for the Customer Information System Project.
- c. EE #451 and EE #501 budget estimates are based on a price times quantity estimation.
- d. Staffing levels for EE #451 and EE #501 are based on previous implementation experience by Bass & Company, vendor provided information and detailed discussions with ITS personnel. EE #451 cost estimates are based on \$50 per hour average (including on-costs) for all ITS labor categories. EE #501 hourly rates are based on Bass & Company's experience with new CIS implementations, and working with different vendors and third party integrators.
- e. No escalation.
- f. Not applicable.
- g. See Attachment 1.

[illegible]

Source: Poller, AlCherns Publications, Publications Director, ASMA, P.O. Box 100, M., O.A.M. for All Degrees with Less

	Sep 2005 Dollars	Oct 2005 Dollars	Nov 2005 Dollars	Dec 2005 Dollars
16	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00
32	0.00	0.00	0.00	0.00
33	0.00	0.00	0.00	0.00
34	0.00	0.00	0.00	0.00
35	0.00	0.00	0.00	0.00
36	0.00	0.00	0.00	0.00
37	0.00	0.00	0.00	0.00
38	0.00	0.00	0.00	0.00
39	0.00	0.00	0.00	0.00
40	0.00	0.00	0.00	0.00
41	0.00	0.00	0.00	0.00
42	0.00	0.00	0.00	0.00
43	0.00	0.00	0.00	0.00
44	0.00	0.00	0.00	0.00
45	0.00	0.00	0.00	0.00
46	0.00	0.00	0.00	0.00
47	0.00	0.00	0.00	0.00
48	0.00	0.00	0.00	0.00
49	0.00	0.00	0.00	0.00
50	0.00	0.00	0.00	0.00
51	0.00	0.00	0.00	0.00
52	0.00	0.00	0.00	0.00
53	0.00	0.00	0.00	0.00
54	0.00	0.00	0.00	0.00
55	0.00	0.00	0.00	0.00
56	0.00	0.00	0.00	0.00
57	0.00	0.00	0.00	0.00
58	0.00	0.00	0.00	0.00
59	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00
61	0.00	0.00	0.00	0.00
62	0.00	0.00	0.00	0.00
63	0.00	0.00	0.00	0.00
64	0.00	0.00	0.00	0.00
65	0.00	0.00	0.00	0.00
66	0.00	0.00	0.00	0.00
67	0.00	0.00	0.00	0.00
68	0.00	0.00	0.00	0.00
69	0.00	0.00	0.00	0.00
70	0.00	0.00	0.00	0.00
71	0.00	0.00	0.00	0.00
72	0.00	0.00	0.00	0.00
73	0.00	0.00	0.00	0.00
74	0.00	0.00	0.00	0.00
75	0.00	0.00	0.00	0.00
76	0.00	0.00	0.00	0.00
77	0.00	0.00	0.00	0.00
78	0.00	0.00	0.00	0.00
79	0.00	0.00	0.00	0.00
80	0.00	0.00	0.00	0.00
81	0.00	0.00	0.00	0.00
82	0.00	0.00	0.00	0.00
83	0.00	0.00	0.00	0.00
84	0.00	0.00	0.00	0.00
85	0.00	0.00	0.00	0.00
86	0.00	0.00	0.00	0.00
87	0.00	0.00	0.00	0.00
88	0.00	0.00	0.00	0.00
89	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00
91	0.00	0.00	0.00	0.00
92	0.00	0.00	0.00	0.00
93	0.00	0.00	0.00	0.00
94	0.00	0.00	0.00	0.00
95	0.00	0.00	0.00	0.00
96	0.00	0.00	0.00	0.00
97	0.00	0.00	0.00	0.00
98	0.00	0.00	0.00	0.00
99	0.00	0.00	0.00	0.00
100	0.00	0.00	0.00	0.00

Hawaiian Electric Company
CIS Replacement Project (P0000571)
ITS Labor Hours
2005 Expenses

IND	Description	Rate	2005 Hours	Jan 2005 Hours	Feb 2005 Hours	Mar 2005 Hours	Apr 2005 Hours	May 2005 Hours	Jun 2005 Hours	Jul 2005 Hours	Aug 2005 Hours	Sep 2005 Hours	Oct 2005 Hours	Nov 2005 Hours	Dec 2005 Hours
NE	IT Project Manager	50	512	188	188	184									
NE	Conversion & Interface TL	50	240	188	72										
NE	Data Conversion Analyst #3	50	240	188	72										
NE	Interface Programmer/Analyst #1	50	240	188	72										
NE	CIS PIA #0	50	240	108	72										
	Monthly Total		6,508	840	448	184	176	108	304	476	600	580	840	600	782

[illegible]

Hawaiian Electric Company
CIS Replacement Project (P0000571)
Outside Services Labor Hours
2005 Expenses

Ind	EE#	Description	Rate	2005	Jan 2005	Feb 2005	Mar 2005	Apr 2005	May 2005	Jun 2005	Jul 2005	Aug 2005	Sep 2005	Oct 2005	Nov 2005	Dec 2005
NE	501	Project Manager	100	512	108	100	184									
NE	501	System Integrator PM	325	512	184	180	184									
NE	501	Business Transaction TL	325	80	80											

Hawaiian Electric Company
CIS REPLACEMENT PROJECT (P0000571)
Non-Labor Allocation Percentages to Companies

Allocation percentages:		
	# Cust Dec2003	% of tot
HECO	288,877	68.7%
HELCO	69,235	16.6%
MECO	61,423	14.7%
Total	417,335	100.0%

CIS Replacement Project
Assumptions

CA-IR-2
DOCKET NO. 04-0113
PROJECT NO. P0000571
ATTACHMENT 1
PAGE 7 OF 8

General Project Assumptions	1	New CIS goes live 22 months after project start up
	2	ACCESS retired 22 months after project start up
Staffing Assumptions		
	Project Manager	1
		Current project manager used by CSD will be the project manager on all ACCESS modification projects requiring the position
		2
		Project Manager will be involved in project from project start up thru post implementation support
		3
		May be full or part time position depending upon size and complexity of project
Change Management Lead	1	Position will be filled by person within Customer Service
	2	Involvement runs from project start up thru user training
	3	May be full or part time position depending upon size and complexity of project

CIS Replacement Project
Assumptions

CA-IR-2
DOCKET NO. 04-0113
PROJECT NO. P0000571
ATTACHMENT 1
PAGE 8 OF 8

Accounting Treatment of Project Costs		The CIS Replacement Project costs were developed based on the accounting standards for handling software development project drafted and proposed to the Consumer Advocate. Development of the project cost was based on the following: 1) All costs prior to vendor product selection will be an O&M expense 2) Following vendor selection, costs will be either deferred or O&M depending on the following: a) Costs to convert current system data into the format required by the new system will be O&M b) All training costs will be O&M; both development of training materials and training sessions c) All other labor costs will be deferred expenses 3) Hardware will be a capital expense 4) License fee will be a deferred expense 5) Inter-island travel, lodging, and per diem will be a deferred expense
Installation Costs		
External Costs	1	Project manager for PUC Application project will continue as project manager for the Replacement Project. Current hourly rate is \$ per hour, no expenses
	2	System Integrator Project Manager, Business Transition Team Lead, and Functional Architect positions will be filled by Bass & Company consultants at \$ /hour. Hourly rate adjusted to reflect % expenses
	3	Selected vendor will provide resources for the following positions: 1) Installation Team Lead 2) Product Architect 3) CIS Programmer / Analysts (4) Installation Team Lead and Product Architect positions use a \$ per hour rate. A % expense rate is built into the hourly rate. The CIS Programmer Analyst positions have a \$ per hour rate. A % expense rate is built into the hourly rate.
	4	Contractors, preferably local, will fill the following positions: 1) Tester - \$ per hour 2) Policy/Process/Procedure Analyst - \$ per hour 3) Data Conversion Analysts (2) - \$ per hour 4) Data Conversion Programmers (2) - \$ per hour 5) Interface Programmer Analysts (3) - \$ per hour 6) CIS Programmer Analyst - \$ per hour 7) Database Administrator - \$ per hour, estimate provide by ITS based on IBM rates 8) Technical Support - \$ per hour, estimate provided by ITS based on IBM rates.
ITS	5	ITS has agreed to provide 4 CSS (Customer Support Services)/EIS (Employee Information Systems) Application Affinity Group members for the project.
	6	ITS has agreed to provide, at no charge, a database administrator and technical support person to shadow and learn from the consultants hired to fill those roles.
	7	For simplification ITS is requesting that all non-ITS project managers use \$ per hour for all ITS Labor Categories. In ITS, the predominant labor class is Teacher Coach which applies to BSCs, PMs, Sr Analysts or Analysts.

CA-IR-661

Ref: response to CA-IR-352 (Human Resources Suite).

Please provide the following:

- a. What is the currently estimated start date for Phase I of the HRS project?
- b. What is the currently estimated completion date for Phase I of the HRS project?

HECO Response:

The in-service date for Phase I of the HRS project has been revised to 2006 and therefore the amortization of the HR Suite software development costs will be removed from the TY 2005 estimate as listed on HECO's list of TY updates which was filed with the Consumer Advocate, Department of Defense and the Commission on May 5, 2005.

According to the Attachment 3H at page 6, contract security services are set forth at six locations (Command Center, Kahe, Waiau, Honolulu, King and Ward) on a weekly and monthly estimated basis. However, these amounts do not appear to tie into HECO WD 101(C) at pages 277-282 for

- a. Detailed calculations for security service charges relating the amount shown in Attachment 3H at page 6 to the specific amounts included in the test period.
- b. To the extent not provided in your response to part (a), a detailed calculation and copies of supporting documentation for the Honolulu PHS charges of \$86,000.
- c. To the extent not provided in your response to part (a), a detailed calculation and copies of supporting documentation for the Waiau PHS charges of \$294,608.
- d. To the extent not provided in your response to part (a), a detailed calculation and copies of supporting documentation for the Kahe PHS charges of \$267,808.

HECO Response:

by the Company to replace damaged and stolen items that amounted to \$160,000 (total of three line items shown on CA-IR-2, HECO T-6, Attachment 4C, page 4). A copy is provided on page 5 summarizing the amounts totaling \$160,000. The representative year selected for the projection of 2005 was 1995 as it demonstrated a level of security violation activities and cost that would be incurred in a normal year. Production Department's share of \$64,000 for lost or stolen tools was then allocated to Honolulu (\$16,000), Waiau (\$32,000) and Kahe (\$16,000). Waiau was allocated the larger amount due to the higher level of lost or stolen claims. The cost for replacement of damaged equipment has not been budgeted for in any other area in production O&M. Therefore, there is no duplication of cost.

- b. Please refer to the table on page 4.
- c. Please refer to the table on page 4.
- d. Please refer to the table on page 4.

Hawaiian Electric Company, Inc.
Rate Case - Test Year 2005
Reconcillation - RA PHS-Security-501 Expense Element

<u>Reference</u>	<u>Loc/Chrg</u>	<u>NARUC</u>	<u>Amt</u>
HECO-WP-101(G), page 877	Honolulu	506010	\$86,000
HECO-WP-101(G), page 879	Waiau	506020	\$294,608
HECO-WP-101(G), page 882	Kahe	506030	\$267,808
			<u>\$648,416</u>

CA-IR-2, HECO T-6, Attach 3H, pg 1	PHS Non-Prog	---	\$584,416
CA-IR-2, HECO T-6, Attach 4, pg 1	PHS Proj	---	\$64,000
(Project Cost Total = \$160,000 per total of three items show on CA-IR-2, HECO T-6 Attach 4C, pg 4)			
			<u>\$648,416</u>

CA-IR-2, HECO T-6, Attach 3H, pg7	Honolulu	\$70,000
Share of \$64,000 on CA-IR-2, HECO T-6, Attach 4C, pg 4	Honolulu	\$16,000
		<u>\$86,000</u>
CA-IR-2, HECO T-6, Attach 3H, pg7	Waiau	\$262,608
Share of \$64,000 on CA-IR-2, HECO T-6, Attach 4C, pg 4	Waiau	\$32,000
		<u>\$294,608</u>
CA-IR-2, HECO T-6, Attach 3H, pg7	Kahe	\$251,808
Share of \$64,000 on CA-IR-2, HECO T-6, Attach 4C, pg 4	Kahe	\$16,000
		<u>\$267,808</u>
		<u>\$648,416</u>

Hawaiian Electric Company, Inc.
Rate Case - Test Year 2005
Security - Historical Cost

	<u>2003</u> <u>Actual</u>	<u>2004</u> <u>Actual</u>	<u>2005</u> <u>Budget</u>
Honolulu---			
PHS933HSTNENPHZZZZZ501	180,220	124,943	70,000
Kahe---			
PHS933KSTNENPHZZZZZ501	200,062	197,628	251,808
Waiau---			
PHS933WSTNENPHZZZZZ501	245,303	228,423	262,608
Total	<u>625,585</u>	<u>550,994</u>	<u>584,416</u>

Sheet1

TIME	POLICE REPORT #	ITEM TAKEN/INCIDENT	VALUED	REPORTING PERSON	COST TO REPLACE
6am	95-086847	COPPER	\$ 5,320.74	Tom Harrington	COST RECOVERED
545AM	95-091271	TOOLS	\$ 60,000.00	American Line Builders	DNA
830AM	95-152538	hoploe bucket	\$ 3,000.00	Gordon Mattos	\$ 1,500
930AM	95-203784	Jumping Jack	\$ 2,019.00	Gordon Mattos	\$ 2,019
750AM	95-215526	COPPER	\$ 60.00	Gordon Mattos	\$ 4,500
830AM	95-224478	COPPER	\$ 30.00	Jerry Donaldson	\$ 4,500
700AM	95-232782	COPPER	\$ 60.00	Nosaka, Leroy	\$ 4,500
530PM	95-234670	COPPER	\$ 30.00	Roy Yokono	\$ 4,500
2PM	95-237351	COPPER	UNK	Substation	\$ 4,500
310PM	95-237522	COPPER	\$ 120.00	BURNS	\$ 4,500
8AM	95-26150	COPPER	\$ 60.00	Grounds Keeper	\$ 1,000
4PM	95-314988	COPPER	\$ 300.00	Rodney Joseph	
815AM	95-319054/055	COPPER	\$ 60.00	Roy Yokono	\$ 3,000
257PM	95-320770	COPPER	\$ 60.00	Robert Bull	\$ 5,000
	95-354816	COPPER	\$ 200.00	Frank Nachno	
815AM	95-363608	COPPER	\$ 200.00	Robert Souza	\$ 4,500
12AM		CTRL WIRE	\$ 2,000.00	Substation	
1PM	95-396-005	COPPER	\$ 200.00	AL BASCON	\$ 4,500
920AM	95-397-340	COPPER	\$ 200.00	AL BASCON	\$ 4,500
930PM	95-407-147	POWER TOOLS	\$ 4,000.00	G. MATTOS	
2PM		COPPER		SUBSTATION	
0845AM		NOTHING TAKEN		G. MATTOS	
		hoploe	\$ 50,000	G. MATTOS	
		hoploe recovered			
		TRESPASSING			
		BREAK-IN		ED LEWIS	
		SHOOTING		SILVIA MC CRAW	
		CRIMINAL PROPERTY		PAT MIZUTA	
	93-160-298	VANDALISM			
		THEFT			
		THEFT			
		THEFT	\$ 75.00		\$ 48,519

Page 1

Σ ① = \$158,519
rounded = \$160,000

CA-IR-663

Ref: HECO Responses to CA-IR-2, Attachment 3A at page 3, RA=PIB Outside Services.

According to the workpaper, \$60,000 has been included for "Outside Services-General (3 stations)" with an Indicator of "NC." However, the costs appear to be included in non-labor direct expenses. Please provide the following information:

- a. Explain why these non-billable clearing amounts are treated as direct non-labor costs.
- b. Provide a detailed calculation, workpapers and supporting documentation for these specific outside services charges.
- c. Provide comparable actual charges by vendor for each of the years 2002, 2003 and 2004.

HECO Response:

- a. The \$60,000 for work involving Activity 720, Improve Business Processes, should have been treated as a non-billable clearing amount and in error was improperly budgeted as a direct O&M expense item. See CA-IR-2, Attachment 3A at page 2, for charges to RA PIB, Activity 720, confirming that the \$60,000 amount was not duplicated in error.
- b. The 2005 TY amount of \$60,000 was originally developed in 2003 for outside consulting services to support process improvement. In December, 2004, a three-year agreement between ABB and HECO was approved (2005 through 2007) for a shared (with Tesoro) resident ABB consultant that will provide on-site technical and emergency support on Kahe, Waiau and Honolulu Station control systems. The consultant will also provide custom maintenance and operator training. Annual cost per year amounts to \$57,840 in 2005, \$60,180 in 2006, and \$62,615 in 2007.
- c. Comparable actual charges for 2002, 2003 and 2004 are not available. The amounts in the 2005 TY forecast apply to 2005, 2006 and 2007.

CA-IR-664

Ref: HECO Responses to CA-IR-2, Attachment 3A at page 7, RA=PIK, City Water Charges \$285,732.

According to the supporting workpaper, "revised budget amount not reflected on this sheet. Can't locate supporting doc to show change." Please provide the following information:

- a. Actual monthly charges for Kahe city water costs to HP000336 for each available month of 2004.
- b. All supporting information for the Company's proposed expense amount.
- c. Explain any revisions required to properly reflect Kahe city water costs in the test period.

HECO Response:

- a. Actual 2004 monthly charges for Kahe city water costs are provided on page 3.
- b. The 2005 city water expense forecast amount was determined in May 2003, when the 2005 forecast was first developed. At that time, the actual water consumption expense for the previous two years (\$282,807 in 2001 and \$233,650 in 2002) was used to estimate the 2005 forecast amount. Between the 2001 and 2002 actual expenditures, the higher of the two (2001), escalated by about 1%, was used to reflect full year operation of both Kahe Units 5 & 6 because Kahe 6 was shutdown for a 14 week planned outage, and the fact that Kahe 5 & 6 consume the bulk of the city water usage at Kahe Station based on the steam atomization burner design.

The Kahe Station actual water consumption dropped significantly in 2003 and 2004 after water conservation efforts in 2003 led to the discovery of several underground city water pipe leaks within the Kahe Station property. Actual expenditures were reduced to \$156,174 in 2003 and \$161,522 in 2004, but the 2005 budget item remained at the original level.

- c. Company proposes to adjust the 2005 test year amount from \$285,732 (CA-IR-2, Attachment 3A at page 7) to \$185,280 based on 2005 year-to-date actual through May amounting to \$77,201 ($\$77,200/5 * 12 = \$185,280$).

1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: HP000736 From Date: 200401 To Date: 200412 Show Emp Info: No

Company: HECO

Parent WO:

Work Order: HP000736 City Water \$\$ for Kahe Station

Invoice Transactions

Trans Date	Acct Code	Cat No	Supplier No	Inv No	Inv Item No	Inv Item Desc	Contract No	Portion No	Element No	Trans Amt
Expense Element: 501 Outside Svcs-General										
01/13/2004	PIK242KSTNENPIZZZZZ501		002049	1028530-	001	SVC PERIOD 9/15/03-1				779.86
02/02/2004	PIK242KSTNENPIZZZZZ501		002049	1028529-	001	SVC PERIOD 12/20/03-				12766.78
02/04/2004	PIK242KSTNENPIZZZZZ501		002049	1028530-	001	SVC PERIOD 12/20/03-				2722.24
03/16/2004	PIK242KSTNENPIZZZZZ501		002049	1028530-	001	SVC PERIOD 1/23/04-2				2456.92
03/16/2004	PIK242KSTNENPIZZZZZ501		002049	1028529-	001	SVC PERIOD 1/23/04-3				18439.48
04/21/2004	PIK242KSTNENPIZZZZZ501		002049	1028529-	001	02219056.84188403 3/1				11456.02
04/21/2004	PIK242KSTNENPIZZZZZ501		002049	1028530-	001	METER 79129009 2/25-				1072.90
05/21/2004	PIK242KSTNENPIZZZZZ501		002049	1028529-	001	SVC PERIOD: 03/30/04				13125.16
05/21/2004	PIK242KSTNENPIZZZZZ501		002049	1028530-	001	SERVICE PERIOD: 03/				568.00
06/10/2004	PIK242KSTNENPIZZZZZ501		002049	1028530-	001	SVC: 04/30/04 - 05/27/0				356.14
07/08/2004	PIK242KSTNENPIZZZZZ501		002049	1028529-	001	SVC: 04/27/04 - 05/27/0				14952.70
07/15/2004	PIK242KSTNENPIZZZZZ501		002049	1028529-	001	SVC: 05/27/04 - 06/28/0				16990.12
08/06/2004	PIK242KSTNENPIZZZZZ501		002049	1028530-	001	SVC: 05/27/04 - 06/28/0				853.12
08/09/2004	PIK242KSTNENPIZZZZZ501		002049	1028529-	001	BILLING PD: 06/28/04 -				15996.16
09/07/2004	PIK242KSTNENPIZZZZZ501		002049	1028530-	001	BILLING PD: 06/28/04 -				655.12
09/07/2004	PIK242KSTNENPIZZZZZ501		002049	1028529-	001	SVC PD: 07/29/04 - 08/				480.88
09/27/2004	PIK242KSTNENPIZZZZZ501		002049	1028529-	001	SVC PD: 07/29/04 - 08/				12958.84
10/07/2004	PIK242KSTNENPIZZZZZ501		002049	1165291-	001	SVC PD: 06/10/04 - 08/				3.70
10/07/2004	PIK242KSTNENPIZZZZZ501		002049	1028530-	001	SVC PD: 08/26/04 - 09/2				371.98
11/08/2004	PIK242KSTNENPIZZZZZ501		002049	1028530-	001	SVC PD: 08/26/04 - 09/				13366.72
12/01/2004	PIK242KSTNENPIZZZZZ501		002049	1028530-	001	SVC PD: 09/27/04 - 10/				516.52
12/08/2004	PIK242KSTNENPIZZZZZ501		002049	1165291-	001	SVC PD: 09/27/04 - 11/				3.70
12/08/2004	PIK242KSTNENPIZZZZZ501		002049	1028529-	001	SVC PD: 10/26/04 - 11/				10345.24
12/10/2004	PIK242KSTNENPIZZZZZ501		002049	1028529-	001	SVC PD: 09/27/04 - 10/				10283.86

Expense Element: 501 Subtotal: 161522.16

Total: 161522.16

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CA-IR-665

Ref: HECO Responses to CA-IR-2, Attachment 3A at page 21, RA=PIN, Recycle H9 Boiler Chem Cleaning.

Please provide the following information regarding this \$400,000 expense that was added into test year projected expenses upon “recycle” of the budget:

- a. Explain why this activity and cost was not originally included in the budget.
- b. Describe the reasons for the modification to the budget to include this item.
- c. What has been the historical frequency of such boiler chemical cleaning activities by outside contractors?

HECO Response:

- a. During the 2002-2003 planned outage, HECO’s boiler inspector noted copper deposits in the steam drum which is an indicator that a boiler chemical clean may be needed. Boiler waterwall tube samples, however, indicated that the tubes were in relatively good condition. Considering both findings a recommendation was made to chemically clean the boiler during the next planned outage in 2006. Therefore the H9 chemical cleaning was not originally included in the original budget, because H9 was not scheduled for an outage in 2005 when the budget was developed. (The original 2005 budget inputs from Production were developed in the May-June 2003 timeframe. The earlier overhaul schedule for 2005, as shown by the 1/12/04 revision included in HECO-627, did not include a H9 overhaul). An unrelated problem on the H9 generator rotor prompted scheduling an outage in 2005 to rewind the generator rotor as shown in the revised 2005 Planned Outage Schedule in CA-IR-43. The chemical cleaning activity was scheduled with the change in outage schedule.
- b. The H9 chemical cleaning item was added in 4/15/04, but an actual overhaul schedule change was not incorporated because a chemical cleaning would not require a long planned

revised 2005 overhaul schedule dated 4/08/05 included a long outage for the generator rotor

equipped but did not include the expenses for the chemical clean because it was determined

CA-IR-666

Ref: HECO Responses to CA-IR-2, Attachment 3A at pages 17 and 21, RA=PIN, Iwelei Pipeline Pigging.

Please provide the following information regarding this \$160,000 plus \$80,000 [recycle added] expense that was added into test year projected expenses upon “recycle” of the budget:

- a. Explain why this activity and cost was only partially included in the budget.
- b. Describe the reasons for the modification to the budget to increase the cost of this item.
- c. What has been the historical frequency and cost of such pipeline pigging activities by outside contractors in each of the past five years?

HECO Response:

- a. The Iwelei pipeline is required to meet Federal Department of Transportation (DOT) regulation CFR-195. The regulation impacted the Iwelei pipeline in 1999 and prescribes safety standards (i.e., pipeline testing) and reporting requirements that apply to the Iwelei pipeline. Ongoing requirements are expected to increase as HECO learns more about the impacts of the regulation on pipeline maintenance and inspection compliance. The increased amount in the 2005 budget reflects our current understanding of additional nondestructive testing (pigging) that needs to be done in 2005 in order to meet compliance requirements.
- b. The 2005 budget was increased to account for additional types of pigging. Year-to-date expenditures amount to \$130,000 for Ultrasonic and Geometry pigging performed earlier this year. Another \$100,000 for a Transcan pigging process that will inspect the longitudinal seam in the Iwelei fuel pipe is being planned.

c. Historical expenditures from 1999 through 2004 are provided below:

<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>
\$84,923	\$262,147	\$0	\$103,794	\$133,446	\$73,125

CA-IR-667

Please provide a detailed monthly breakdown of first quarter 2005 actual non-fuel Production Operations and Maintenance expenses by RA, NARUC Account and Expense Element in hard copy and magnetic media (Excel format).

HECO Response:

Please see pages 2 – 38 for the detailed monthly breakdown. Referring to page 36 of 38, NARUC 553, RA PIT, Expense Element (EE) 900, the negative amounts shown are to account for insurance claim adjustments resulting from the Waiau 9 forced outage experienced in October, 2004. Please refer to Revised CA-IR-43, CA-IR-537 part d., CA-IR-538, and CA-IR-612 for additional information on Waiau Unit 9.

CA-IR-667

Please provide a detailed monthly breakdown of first quarter 2005 actual non-fuel Production Operations and Maintenance expenses by RA, NARUC Account and Expense Element in hard copy and magnetic media (Excel format).

HECO Response:

Please see pages 2 – 37 for the detailed monthly breakdown. Referring to page 35 of 37, NARUC 553, RA PIT, Expense Element (EE) 900, the negative amounts shown are to account for insurance claim adjustments resulting from the Waiau 9 forced outage experienced in October, 2004. Please refer to Revised CA-IR-43, CA-IR-537 part d., CA-IR-538, and CA-IR-612 for additional information on Waiau Unit 9.

Hawaiian Electric Company, Inc.
Rate Case - Test Year 2005
Other Production O&M Actuals - 1st Quarter 2005

NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
500	OPER SUPV & ENG	500020	OPER SUPV&ENG WAIU	PYA	150	3427.41	3005.07	4130.6	10563.08
					155	-64.37	-56.01	-79.16	-199.54
					201	0	620.35	43.18	663.53
					205	0	430.25	108.84	539.09
					301	628.41	1013.22	722.42	2364.05
					405	900.09	901.53	1187.2	2988.82
					406	328.8	312.26	411.2	1052.26
					421	523.34	467.78	616	1607.12
					422	1094.63	957.42	1260.8	3312.85
					423	282.07	248.4	341.21	871.68
					901	75000	75000	75000	225000
				PYA Total		82120.38	82900.27	83742.29	248762.94
				PYB	150	9333.17	7119.42	3984.75	20437.34
					155	610.13	649.16	876.66	2135.95
					406	632.4	516.57	289.13	1438.1
					421	1006.57	773.85	433.13	2213.55
					422	2105.37	1583.88	886.5	4575.75
					423	834.14	654.12	409.26	1897.52
					501	0	0	6760	6760
				PYB Total		14521.78	11297	13639.43	39458.21
				PYC	150	2740.88	1985.45	2847.4	7573.73
					155	17.46	11.91	-70.94	-41.57
					405	929.68	760.55	1090.74	2780.97
					406	339.6	263.45	377.8	980.85
					421	540.53	394.65	565.96	1501.14
					422	1130.61	807.7	1158.36	3096.67
					423	231.37	168.12	233.63	633.12
				PYC Total		5930.13	4391.83	6202.95	16524.91
				PYF	150	56.8	60.2	842.8	959.8
					155	-3.92	-7.32	-168.29	-179.53
					405	13.14	14.84	207.76	235.74
					406	4.8	5.14	71.97	81.91
					421	7.64	7.7	107.81	123.15
					422	15.98	15.76	220.64	252.38
					423	4.44	4.45	56.78	65.67
				PYF Total		98.88	100.77	1339.47	1539.12
				PYM	150	0	108.57	0	108.57
					155	0	-1.41	0	-1.41
					405	0	22.26	0	22.26
					406	0	7.71	0	7.71
					421	0	11.55	0	11.55
					422	0	23.64	0	23.64
					423	0	9.02	0	9.02
				PYM Total		0	181.34	0	181.34
				PYT	150	0	1383.6	2490.48	3874.08
					155	0	251	451.8	702.8
					404	0	1155.2	2079.36	3234.56
					406	0	102.8	185.04	287.84
					421	0	154	277.2	431.2
					422	0	315.2	567.36	882.56
					423	0	137.65	247.77	385.42
				PYT Total		0	3499.45	6299.01	9798.46
				500020 Total		102671.17	102370.66	111223.15	316264.98
		500030	OPER SUPV&ENG KAHE	PIF	150	0	0	10.88	10.88
					155	0	0	0.19	0.19
					405	0	0	3.71	3.71
					406	0	0	1.29	1.29
					421	0	0	1.93	1.93
					422	0	0	3.94	3.94
					423	0	0	0.94	0.94
				PIF Total		0	0	22.88	22.88
				PRD	150	5709.31	5211	6392.16	17312.47
					155	1014.19	1333.79	1666.62	4014.6

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NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
500	OPER SUPV & ENG	500030	OPER SUPV&ENG KAHE	PRD	205	0	0	57.2	57.2
					404	4478.4	4332	5313.92	14124.32
					406	387.6	385.5	472.88	1245.98
					421	616.93	577.5	708.4	1902.83
					422	1290.39	1182	1449.92	3922.31
					423	564.11	551.07	678.5	1793.68
					462	0	66.65	0	66.65
					501	260	0	260	520
					PRD Total	14320.93	13639.51	16999.6	44960.04
					500030 Total	14320.93	13639.51	17022.48	44982.92
					500 Total	116992.1	116010.17	128245.63	361247.9
502	STEAM EXP	502010	STEAM EXP HONO	PIB	150	920.08	0	131.8	1051.88
					155	-35.64	0	-5.46	-41.1
					405	183.96	0	29.68	213.64
					406	67.2	0	10.28	77.48
					421	106.96	0	15.4	122.36
					422	223.72	0	31.52	255.24
					423	74.21	0	10.64	84.85
					PIB Total	1540.49	0	223.86	1764.35
				PIH	150	44252.77	36766.46	41701.81	122721.04
					155	2707.44	404.01	2302.41	5413.86
					201	7250.21	6599.1	4016.98	17866.29
					205	0	48.95	0	48.95
					405	8707.18	8011.8	9098.95	25817.93
					406	2992.49	2774.96	3151.51	8918.96
					421	5158.25	4157.04	4721.11	14036.4
					422	9649.9	8508.43	9662.85	27821.18
					423	3909.46	3129.98	3705.58	10745.02
					501	1704.26	2030.78	1607.24	5342.28
					900	-1431.39	0	0	-1431.39
					PIH Total	84900.57	72431.51	79968.44	237300.52
				PIK	201	58.88	0	139.69	198.57
					PIK Total	58.88	0	139.69	198.57
				PIN	155	-3.69	0	0	-3.69
					423	-0.31	0	0	-0.31
					PIN Total	-4	0	0	-4
				PIO	150	0	131.8	0	131.8
					155	0	-7.15	0	-7.15
					405	0	29.68	0	29.68
					406	0	10.28	0	10.28
					421	0	15.4	0	15.4
					422	0	31.52	0	31.52
					423	0	10.5	0	10.5
					PIO Total	0	222.03	0	222.03
				PIW	201	58.87	0	139.69	198.56
					PIW Total	58.87	0	139.69	198.56
				PJC	150	613.98	0	0	613.98
					155	-138.65	-0.06	0	-138.71
					406	55.2	0	0	55.2
					421	87.86	0	0	87.86
					422	183.77	0	0	183.77
					423	39.87	-0.01	0	39.86
					PJC Total	842.03	-0.07	0	841.96
				PRS	150	6599.32	0	0	6599.32
					155	-467.52	67.51	0	-400.01
					404	5435.08	0	0	5435.08
					406	470.4	0	0	470.4
					421	748.72	0	0	748.72
					422	1566.04	0	0	1566.04
					423	514.45	5.69	0	520.14
					PRS Total	14866.49	73.2	0	14939.69
				PYE	150	133.18	331.11	367.9	832.19
					155	22.22	18.54	20.6	61.36

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						Data						
NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Jan 05	Feb 05	Mar 05	As of 3/31/05			
502	STEAM EXP	502010	STEAM EXP HONO	PYE	405	26.28	66.78	74.2	167.26			
					406	9.6	23.13	25.7	58.43			
					421	15.28	34.65	38.5	88.43			
					422	31.96	70.92	78.8	181.68			
					423	13.04	29.43	32.7	75.17			
				PYE Total		251.56	574.56	638.4	1464.52			
				502010 Total					102514.89	73301.23	81110.08	256926.2
				502020	STEAM EXP WAI'AU	PBT	150	0	133.88	200.82	334.7	
							155	0	-2.15	-3.22	-5.37	
							404	0	115.52	173.28	288.8	
		406	0				10.28	15.42	25.7			
		421	0				15.4	23.1	38.5			
		422	0				31.52	47.28	78.8			
		423	0				11.08	16.64	27.72			
		PBT Total					0	315.53	473.32	788.85		
		PIA				205	0	452.89	669.04	1121.93		
		PIA Total				0	452.89	669.04	1121.93			
		PIB	150			2503.36	395.4	757.85	3656.61			
			155			-102.78	-16.35	-31.36	-150.49			
			405			499.32	89.04	170.66	759.02			
			406			182.4	30.84	59.11	272.35			
			421			290.32	46.2	88.55	425.07			
			422	607.24	94.56	181.24	883.04					
			423	201.4	31.92	61.18	294.5					
		PIB Total		4484.00	674.64	1407.33	6440.40					

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						Data				
NARUC	NARUC Descr	GL INT N	Inter Code Descr	RA	EE	Jan 05	Feb 05	Mar 05	As of 3/31/05	
502	STEAM EXP	502020	STEAM EXP WAI'AU	PIW	405	27209.17	25706	30512.02	83427.19	
					406	9324.79	8903.5	10568.22	28796.51	
					421	16132.3	13337.91	15831.68	45301.89	
					422	30022.68	27299.32	32403.34	89725.34	
					423	11615.51	9731.3	11661.07	33007.88	
					501	2196.8	290.54	1116.24	3603.58	
				PIW Total		262474.46	215201.28	278267.34	755943.08	
				PIX	150	534.07	157.82	420.85	1112.74	
					155	52.17	18.19	48.49	118.85	
					301	0	6989.22	0	6989.22	
					405	102.61	33.39	89.04	225.04	
					406	32.02	11.57	30.85	74.44	
					421	62.43	17.33	46.21	125.97	
					422	97.53	35.46	94.56	227.55	
					423	48.24	14.83	39.53	102.6	
				PIX Total		929.07	7277.81	769.53	8976.41	
				PJC	150	4926.84	5322.57	4348.65	14598.06	
					155	-956.84	-860.57	-568.86	-2386.27	
					201	1854.13	40.64	270.14	2164.91	
					205	396.23	0	0	396.23	
					406	417	479.36	397.72	1294.08	
					421	663.73	718.08	595.8	1977.61	
					422	1388.3	1469.62	1219.43	4077.35	
					423	333.11	375.55	318.11	1026.77	
					501	0	0	1749.82	1749.82	
					508	0	703.12	829.94	1533.06	
				PJC Total		9022.5	8248.37	9160.75	26431.62	
				PYE	150	2269.7	1802.71	1876.29	5948.7	
					155	522.53	210.38	150.54	883.45	
					405	433.62	363.58	378.42	1175.62	
					406	158.4	125.93	131.07	415.4	
					421	252.12	188.65	196.35	637.12	
					422	527.34	386.12	401.88	1315.34	
					423	234.22	169.54	170.69	574.45	
					501	260	68	645	973	
				PYE Total		4657.93	3314.91	3950.24	11923.08	
		502020 Total				282436.98	240474.69	299584.48	822496.15	
		502030	STEAM EXP KAHE	PIB	150	4645.95	2306.5	5469.7	12422.15	
					155	-535.7	526.6	-840.79	-849.89	
					405	926.37	519.4	1231.72	2677.49	
					406	338.4	179.9	426.62	944.92	
					421	538.62	269.5	639.1	1447.22	
					422	1126.59	551.6	1308.08	2986.27	
					423	344.89	238.58	389.89	973.36	
					PIB Total		7385.12	4592.08	8624.32	20601.52
					PIK	150	137454.35	123491.55	135011.48	395957.38
						155	3191.09	665.81	-455.11	3401.79
						201	73880.31	66171.12	65505.73	205557.16
						301	298.19	506.61	361.21	1166.01
						405	27254.35	27357.63	29939.75	84551.73
				406		9359.66	9475.62	10369.99	29205.27	
				421		16149.24	14194.99	15534.79	45879.02	
				422		30169.16	29053.56	31795.8	91018.52	
				423		11702.28	10452.94	11328.25	33483.47	
				501	12307.73	21179.54	13179.15	46666.42		
				PIK Total		321766.36	302549.37	312571.04	936886.77	
				PJC	150	4046.22	4572.7	3812.92	12431.84	
					155	-841.98	-849.63	-427.14	-2118.75	
					201	833.88	0	917.02	1750.9	
					205	0	153.79	0	153.79	
					406	340.8	411.23	344.42	1096.45	
					421	542.44	616.03	515.94	1674.41	
					422	1134.62	1260.8	1055.92	3451.34	

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						Data			
NARUC	NARUC Descr	GL INT N	Inter Code Descr	RA	EE	Jan 05	Feb 05	Mar 05	As of 3/31/05
502	STEAM EXP	502030	STEAM EXP KAHE	PJC	423	268.8	313.33	284.99	867.12
					508	0	0	531.82	531.82
				PJC Total		6324.78	6478.25	7035.89	19838.92
				PKM	901	539.11	539.11	539.11	1617.33
					PKM Total		539.11	539.11	539.11
				PYE	150	1020.31	1214.07	1729.13	3963.51
					155	106.22	67.86	96.58	270.66
					405	190.53	244.86	348.74	784.13
					406	69.6	84.81	120.79	275.2
					421	110.78	127.05	180.95	418.78
					422	231.71	260.04	370.36	862.11
					423	94.51	107.94	153.71	356.16
				PYE Total		1823.66	2106.63	3000.26	6930.55
				502030 Total		337839.03	316265.44	331770.62	985875.09
		502 Total					722790.9	630041.36	712465.18
505	ELECTRIC EXP	505010	ELEC EXP-HONO	PIH	150	43243.33	35750.37	40320.04	119313.74
					155	2510.99	420.58	2246.69	5178.26
				PIH	201	0	1093.42	1093.35	2186.77
					405	8504.47	7800.31	8798.42	25103.2
					406	2923.36	2701.7	3047.44	8672.5
					421	5037.91	4047.3	4565.2	13650.41
					422	9427.66	8283.85	9343.71	27055.22
					423	3808.96	3045.84	3584.59	10439.39
				PIH Total		75456.68	63143.37	72999.44	211599.49
				PIO	150	0	0	32.95	32.95
					155	0	0	-4.71	-4.71
					405	0	0	7.42	7.42
					406	0	0	2.57	2.57
					421	0	0	3.85	3.85
					422	0	0	7.88	7.88
					423	0	0	2.37	2.37
				PIO Total		0	0	52.33	52.33
		505010 Total		75456.68	63143.37	73051.77	211651.82		
		505020	ELEC EXP-WAIAU	PIW	150	136147.22	115683.89	136705.82	388536.93
					155	2781.25	-215.55	971.62	3537.32
				PIW	201	3845.98	10500.15	5466.88	19813.01
					405	27100.47	25660.8	30348.41	83109.68
					406	9285.12	8887.85	10511.54	28684.51
					421	16069.11	13314.46	15746.78	45130.35
					422	29890.48	27251.33	32229.58	89371.39
					423	11556.19	9721.8	11592.23	32870.22
				PIW Total		236675.82	210804.73	243572.86	691053.41
		505020 Total		236675.82	210804.73	243572.86	691053.41		
		505030	ELEC EXP-KAHE	PIK	150	136688.97	122885.08	134239.78	393813.83
					155	3188.71	674.5	-374.41	3488.8
				PIK	201	37696.29	11009.36	25634.35	74340
					405	27107.99	27224.04	29765.97	84098
					406	9307.55	9429.37	10309.81	29046.73
					421	16063.43	14125.7	15444.63	45633.76
					422	29997.96	28911.72	31611.25	90520.93
					423	11638.09	10402.6	11270.08	33310.77
				PIK Total		271688.99	224662.37	257901.46	754252.82
				PIP	150	0	0	87	87
					155	0	0	-4.72	-4.72
					405	0	0	29.68	29.68
					406	0	0	10.28	10.28
					421	0	0	15.4	15.4
					422	0	0	31.52	31.52
					423	0	0	6.93	6.93
				PIP Total		0	0	176.09	176.09
				PKM	901	448.27	448.27	448.27	1344.81
					PKM Total		448.27	448.27	448.27
		505030 Total		272137.26	225110.64	258525.82	755773.72		

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NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
505 Total						584269.76	499058.74	575150.45	1658478.95
506	MISC STM PWR EXP	506010	MISC STM PWR EXP	PHS	150	915.5	981.44	797.42	2694.36
					155	-86.87	-127.62	-109.9	-324.39
					301	298.19	506.61	361.21	1166.01
					406	64.6	82.24	66.82	213.66
					421	119.2	123.2	100.1	342.5
					422	202.1	252.16	204.88	659.14
					423	68.4	71.86	57.85	198.11
					155	13.24	-67.78	-100.17	-154.71
					205	28	300.19	174.58	502.77
					405	134.7	912.66	667.8	1715.16
					406	49.2	316.11	231.3	596.61
					421	78.31	473.55	346.5	898.36
					422	163.81	969.24	709.2	1842.25
					423	57.74	335.57	241.25	634.56
					501	0	0	123.2	123.2
				PIB Total		1200.28	7292.39	5359.16	13851.83
				PIH	150	2625.82	2927.34	5348.72	10901.88
					155	191.61	82.54	102.29	376.44
					405	479.63	601.02	1098.16	2178.81
					406	175.2	208.17	380.38	763.75
					421	278.86	311.85	569.82	1160.53
					422	583.29	638.28	1166.24	2387.81
					423	236.39	253.45	458.97	948.81
					501	702.92	961.18	1894.46	3558.56
				PIH Total		5273.72	5983.83	11019.04	22276.59
				PIN	150	134.7	135.6	169.5	439.8
					155	0.78	-3.39	-10.38	-12.99
					405	26.28	29.68	37.1	93.06
					406	9.6	10.28	12.85	32.73
					421	15.28	15.4	19.25	49.93
					422	31.96	31.52	39.4	102.88
					423	11.36	11.13	13.39	35.88
					501	4423.94	525	3604.93	8553.87
				PIN Total		4653.9	755.22	3886.04	9295.16
				PIO	150	0	609.58	65.9	675.48
					155	0	-32.52	-19.63	-52.15
					405	0	137.27	14.84	152.11
					406	0	47.55	5.14	52.69
					421	0	71.23	7.7	78.93
					422	0	145.78	15.76	161.54
					423	0	48.59	3.9	52.49
					501	0	0	27800	27800
				PIO Total		0	1027.48	27893.61	28921.09
				PIP	150	3301.2	1790.73	2113.26	7205.19
					155	-373.21	-33.44	-66.16	-472.81
					405	761.05	534.24	662.24	1957.53
					406	262.4	185.05	229.38	676.83
					421	450.41	277.21	343.62	1071.24
					422	847.66	567.36	703.29	2118.31
					423	244.09	147.96	172.38	564.43
				PIP Total		5493.6	3469.11	4158.01	13120.72
				PJA	150	200.55	186.66	179.19	566.4
					155	-43.99	-19.45	-39.47	-102.91
					406	16.2	19.03	18.17	53.4
					421	25.87	28.52	27.24	81.63
					422	53.99	58.47	55.87	168.33
					423	13.16	14.18	11.89	39.23
				PJA Total		265.78	287.41	252.89	806.08
				PJB	150	180.12	306	315	801.12
					155	42.28	-43.29	-20.19	-21.2
					406	14.4	21.85	22.52	58.77
					421	22.92	32.73	33.72	89.37

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NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
506	MISC STM PWR EXP	506010	MISC STM PWR EXP	PJB	422	47.94	66.98	68.95	183.87
					423	18.66	22.14	24.86	65.66
					501	2881.82	2881.82	2962.44	8726.08
					508	0	972.97	0	972.97
				PJB Total		3208.14	4261.2	3407.3	10876.64
				PJC	150	903.84	1448.4	662.58	3014.82
					155	-51.64	-196.85	-99.98	-348.47
					201	121.56	0	148.22	269.78
					205	0	0	120.31	120.31
					406	73.2	125.99	61.69	260.88
					421	116.51	188.71	92.41	397.63
					422	243.72	386.12	189.12	818.96
					423	71.51	105.33	47.32	224.16
					508	2774.82	0	0	2774.82
				PJC Total		4253.52	2057.7	1221.67	7532.89
				PJW	150	5150.58	4935.89	5221.02	15307.49
					155	105.17	244.68	368.1	717.95
					201	117.06	0	2	119.06
					205	0	0	69.63	69.63
					406	388.8	401.05	421.6	1211.45
					421	618.87	600.73	631.52	1851.12
					422	1294.52	1229.28	1292.32	3816.12
					423	441.11	436.02	470.52	1347.65
					501	0	100	6525.49	6625.49
					508	644.8	0	0	644.8
				PJW Total		8760.91	7947.65	15002.2	31710.76
		506010 Total				62014.05	34971.88	74593.35	171579.28
		506020	MISC STM PWR EXP	PBT	150	33.03	0	0	33.03
					155	1.2	0	0	1.2
					404	41.6	0	0	41.6
					406	3.6	0	0	3.6
					421	5.73	0	0	5.73
					422	11.99	0	0	11.99
					423	2.87	0	0	2.87
				PBT Total		100.02	0	0	100.02
				PHB	150	0	26.39	0	26.39
					155	0	4.4	1.54	5.94
					205	104.64	0	0	104.64
					406	0	2.57	0	2.57
					421	0	3.85	0	3.85
					422	0	7.88	0	7.88
					423	0	2.59	0.13	2.72
				PHB Total		104.64	47.68	1.67	153.99
				PHF	150	460.05	398.71	153.35	1012.11
					155	-9.31	-20.99	-35	-65.3
					406	36	33.41	12.85	82.26
					421	57.3	50.05	19.25	126.6
					422	119.85	102.44	39.4	261.69
					423	37.82	31.77	9.95	79.54
					501	302.5	0	0	302.5
				PHF Total		1004.21	595.39	199.8	1799.4
				PHS	150	4735.72	3844.11	4063.08	12642.91
					155	-901.1	-740.31	-507.31	-2148.72
					406	304.96	278.85	293	876.81
					421	511.6	417.73	438.92	1368.25
					422	994.52	854.98	898.32	2747.82
					423	319.84	261.47	299.47	880.78
					501	13620.02	14058.79	4667.22	32346.03
				PHS Total		19585.56	18975.62	10152.7	48713.88
				PIA	150	13238.64	10575.65	11241.1	35055.39
					155	-661.14	-583.36	-438.1	-1682.6
					205	0	42.27	0	42.27
					301	1937.23	2533.05	1806.05	6276.33

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NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
506	MISC STM PWR EXP	506020	MISC STM PWR EXP	PIA	405	1074.4	1101.87	957.18	3133.45
					406	1120.2	967.8	1012.02	3100.02
					421	1782.99	1449.72	1516.02	4748.73
					422	3729.55	2966.82	3102.75	9799.12
					423	1055.29	841.14	909.52	2805.95
					501	0	0	756	756
				PIA Total		23277.16	19894.96	20862.54	64034.66
				PIB	150	2650.19	2767.8	5321.43	10739.42
					155	184.35	-12.22	285.3	457.43
					201	94.15	0	7456.02	7550.17
					205	0	1604.5	1239.96	2844.46
					405	528.91	623.28	1198.33	2350.52
					406	193.2	215.88	415.06	824.14
					421	307.51	323.4	621.78	1252.69
					422	643.22	661.92	1272.62	2577.76
					423	237.75	232.02	472	941.77
					451	0	0	669.6	669.6
					462	0	0	585.03	585.03
					501	0	0	246.4	246.4
				PIB Total		4839.28	6416.58	19783.53	31039.39
				PIH	150	66.08	0	36.14	102.22
					155	2.83	0	-1.35	1.48
					405	13.14	0	7.42	20.56
					406	4.8	0	2.57	7.37
					421	7.64	0	3.85	11.49
					422	15.98	0	7.88	23.86
					423	5.78	0	2.93	8.71
				PIH Total		116.25	0	59.44	175.69
				PIL	150	757.95	3936.74	5316.05	10010.74
					155	46.09	-345.23	-517.97	-817.11
					405	131.4	819.91	1116.71	2068.02
					406	48	283.99	386.79	718.78
					421	76.4	425.43	579.43	1081.26
					422	159.8	870.74	1185.94	2216.48
					423	67.5	302.51	404.04	774.05
				PIL Total		1287.14	6294.09	8470.99	16052.22
				PIM	150	3604.8	3582	4631.51	11818.31
					155	-1106.47	-1341.96	-558.82	-3007.25
					405	519.06	582.47	753.13	1854.66
					406	189.6	201.79	260.92	652.31
					421	301.78	302.27	390.84	994.89
					422	631.24	618.58	799.82	2049.64
					423	209.65	188.59	342.94	741.18
					501	23.92	0	0	23.92
				PIM Total		4373.58	4133.74	6620.34	15127.66
				PIN	150	0	0	288.15	288.15
					155	0	0	-18.44	-18.44
					405	0	0	63.07	63.07
					406	0	0	21.85	21.85
					421	0	0	32.73	32.73
					422	0	0	66.98	66.98
					423	0	0	22.71	22.71
				PIN Total		0	0	477.05	477.05
				PIO	150	3336.78	2048	1619.65	7004.43
					155	-286.6	-67.71	-244.57	-598.88
					201	259.48	0	0	259.48
					405	653.21	452.62	356.16	1461.99
					406	238.61	156.78	123.37	518.76
					421	379.79	234.86	184.81	799.46
					422	794.38	480.68	378.24	1653.3
					423	255.97	166.77	115.79	538.53
					501	0	0	55600	55600
				PIO Total		5631.62	3472	58133.45	67237.07

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						Jan 05	Feb 05	Mar 05	As of 3/31/05
506	MISC STM PWR EXP	506020	MISC STM PWR EXP	PIP	150	7534.72	3115.27	5779.19	16429.18
					155	244.33	438.4	441.66	1124.39
					201	0	0	0.12	0.12
					205	27.84	51.23	117.54	196.61
					405	1369.91	658.53	1215.04	3243.48
					406	500.4	228.13	420.91	1149.44
					421	796.49	341.73	630.51	1768.73
					422	1665.98	699.35	1290.35	3655.68
					423	652.66	299.2	523.82	1475.68
					501	260.41	0	260.41	520.82
				PIP Total		13052.74	5831.84	10679.55	29564.13
				PIT	150	20372.97	16050.14	16441.01	52864.12
					155	-1349.46	517.16	940.54	108.24
					405	3776.49	3290.77	3389.09	10456.35
					406	1295.28	1139.8	1173.87	3608.95
					421	2238.54	1707.48	1758.51	5704.53
					422	4172.19	3494.78	3599.19	11266.16
					423	1581.62	1394.98	1463.54	4440.14
				PIT Total		32087.63	27595.11	28765.75	88448.49
				PIW	150	3477.85	2110.96	2883.85	8472.66
					155	181.87	-115.06	78.05	144.86
					205	22.91	0	0	22.91
					405	809.22	612.15	829.19	2250.56
					406	287.8	212.03	287.2	787.03
					421	474.46	317.63	430.24	1222.33
					422	945.18	650.1	880.59	2475.87
					423	306.21	168.07	249.49	723.77
					501	4385.03	3854.76	5133.21	13373
				PIW Total		10890.53	7810.64	10771.82	29472.99
				PIX	150	862.33	2279.6	490.98	3632.91
					155	-126.12	38.2	114.8	26.88
					201	6942.28	2945.37	2175.67	12063.32
					205	0	3108.94	499.11	3608.05
					405	161.03	482.3	103.88	747.21
					406	58.43	167.1	35.98	261.51
					421	93.82	250.3	53.9	398.02
					422	193.89	512.2	110.32	816.41
					423	61.67	195.13	50.99	307.79
					501	19391.45	7542.56	60308.19	87242.2
					506	12000	0	0	12000
				PIX Total		39638.78	17521.7	63943.82	121104.3
				PJA	150	199.79	378.64	226.38	804.81
					155	-6.68	32.85	13.61	39.78
					406	14.4	31.29	19.5	65.19
					421	22.93	46.86	29.21	99
					422	47.95	95.9	59.81	203.66
					423	16.21	34.65	20.23	71.09
				PJA Total		294.6	620.19	368.74	1283.53
				PJB	150	876.14	1314	1449	3639.14
					155	13.92	-189.5	-116.25	-291.83
					205	20.78	0	0	20.78
					406	61.2	93.83	103.48	258.51
					421	97.41	140.55	155	392.96
					422	203.76	287.62	317.17	808.55
					423	74.66	94.7	112.25	281.61
					501	26963.29	29545.59	23222.44	79731.32
					508	0	1354.47	0	1354.47
				PJB Total		28311.16	32641.26	25243.09	86195.51
				PJC	150	1040.52	0	0	1040.52
					155	-98.29	-0.25	0	-98.54
					201	165.03	0	107.94	272.97
					205	0	180.06	0	180.06
					406	86.4	0	0	86.4

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						Jan 05	Feb 05	Mar 05	As of 3/31/05
506	MISC STM PWR EXP	506020	MISC STM PWR EXP	PJC	421	137.52	0	0	137.52
					422	287.65	0	0	287.65
					423	79.05	-0.03	0	79.02
					501	802.14	26.41	1478.24	2306.79
					508	1647.38	2330.72	351.56	4329.66
				PJC Total		4147.4	2536.91	1937.74	8622.05
				PJW	150	4971.94	4144.16	4909.29	14025.39
					155	-290.14	-304	-387.53	-981.67
					201	158.01	182.01	593.78	933.8
					205	0	0	11.29	11.29
					406	390.6	345.78	413.87	1150.25
					421	621.74	517.94	619.95	1759.63
					422	1300.52	1059.86	1268.68	3629.06
					423	392.99	323.27	380.5	1096.76
					501	0	100	4229.67	4329.67
					508	967.2	0	0	967.2
				PJW Total		8512.86	6369.02	12039.5	26921.38
				PPI	150	214.69	61.34	122.68	398.71
					155	-49.25	-9.08	-21.82	-80.15
					406	16.8	5.14	10.28	32.22
					421	26.74	7.7	15.4	49.84
					422	55.93	15.76	31.52	103.21
					423	13.89	4.4	8.48	26.77
				PPI Total		278.8	85.26	166.54	530.6
				PRX	150	440.36	0	0	440.36
					155	120.96	0	0	120.96
					404	280.44	0	0	280.44
					406	19.92	0	0	19.92
					421	51.36	0	0	51.36
					422	50.76	0	0	50.76
					423	45.38	0	0	45.38
				PRX Total		1009.18	0	0	1009.18
				PVL	150	1008.33	220.57	0	1228.9
					155	55.86	6.14	0	62
					404	887.37	202.16	0	1089.53
					406	76.8	17.99	0	94.79
					421	122.24	26.95	0	149.19
					422	255.69	55.16	0	310.85
					423	89.28	19.09	0	108.37
				PVL Total		2495.57	548.06	0	3043.63
				PYE	150	5250.18	2280.98	5003.44	12534.6
					155	-187.41	-199.35	-285.87	-672.63
					405	959.22	460.04	1009.12	2428.38
					406	350.4	159.34	349.52	859.26
					421	557.72	238.7	523.6	1320.02
					422	1166.54	488.56	1071.68	2726.78
					423	424.79	175.28	397.25	997.32
				PYE Total		8521.44	3603.55	8068.74	20193.73
				PYF	150	331.1	15.05	60.2	406.35
					155	-10.09	-0.46	-1.84	-12.39
					405	72.27	3.71	14.84	90.82
					406	26.4	1.29	5.14	32.83
					421	42.02	1.93	7.7	51.65
					422	87.89	3.94	15.76	107.59
					423	26.93	1.23	4.9	33.06
					522	9	0	0	9
				PYF Total		585.52	26.69	106.7	718.91
				PYM	150	289.52	72.38	180.95	542.85
					155	62.01	15.5	38.75	116.26
					405	52.56	14.84	37.1	104.5
					406	19.2	5.14	12.85	37.19
					421	30.56	7.7	19.25	57.51
					422	63.92	15.76	39.4	119.08

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					Data				
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506	MISC STM PWR EXP	506020	MISC STM PWR EXP	PYM	423	29.49	7.4	18.5	55.39
				PYM Total		547.26	138.72	346.8	1032.78
		506020	Total			210692.93	165159.01	287200.3	663052.24
		506030	MISC STM PWR EXP	PBT	150	209.28	0	0	209.28
					155	-13.28	0.9	0	-12.38
					404	221.84	0	0	221.84
					406	19.2	0	0	19.2
					421	30.56	0	0	30.56
					422	63.92	0	0	63.92
					423	16.45	0.08	0	16.53
				PBT Total		547.97	0.98	0	548.95
				PBZ	150	855.79	354.8	388.78	1599.37
					155	0.87	-15.11	-2.01	-16.25
					404	804.17	288.8	361	1453.97
					406	69.6	25.7	32.13	127.43
					421	110.78	38.5	48.13	197.41
					422	231.71	78.8	98.5	409.01
					423	71.88	28.61	32.56	133.05
				PBZ Total		2144.8	800.1	959.09	3903.99
				PFC	150	20467	20467	-59856	-18922
				PFC Total		20467	20467	-59856	-18922
				PHF	150	0	245.36	0	245.36
					155	0	-26.9	-11.5	-38.4
					406	0	20.56	0	20.56
					421	0	30.8	0	30.8
					422	0	63.04	0	63.04
					423	0	18.4	-0.96	17.44
				PHF Total		0	351.26	-12.46	338.8
				PHS	150	1099.52	1104.12	797.42	3001.06
					155	-168.61	-134.39	-109.9	-412.9
					301	364.3	333.82	272.43	970.55
					406	79	92.52	66.82	238.34
					421	142.12	138.6	100.1	380.82
					422	250.04	283.68	204.88	738.6
					423	76.98	81.61	57.85	216.44
					501	8087.81	0	20995.24	29083.05
				PHS Total		9931.16	1899.96	22384.84	34215.96
				PIA	150	1522.51	685.14	126.88	2334.53
					155	-333.86	-129.57	-24	-487.43
					405	197.11	100.17	18.55	315.83
					406	72	34.71	6.43	113.14
					421	114.6	51.99	9.63	176.22
					422	239.71	106.38	19.7	365.79
					423	99.75	46.77	8.66	155.18
				PIA Total		1911.82	895.59	165.85	2973.26
				PIB	150	4557.95	3789.26	4052.86	12400.07
					155	155.73	111.57	414.52	681.82
					205	1729.82	-317.86	719.75	2131.71
					405	910.1	853.3	912.66	2676.06
					406	331.66	295.56	316.12	943.34
					421	529.53	442.76	473.56	1445.85
					422	1102.9	906.2	969.24	2978.34
					423	395.27	328.31	376.08	1099.66
					501	0	0	246.4	246.4
				PIB Total		9712.96	6409.1	8481.19	24603.25
				PIF	150	3602.22	3586.63	4318.49	11507.34
					155	200.05	265.51	290.91	756.47
					405	969.15	1023.96	1261.4	3254.51
					406	354	354.73	437.01	1145.74
					421	563.45	531.37	654.61	1749.43
					422	1178.6	1087.44	1339.6	3605.64
					423	318.97	324.33	388.11	1031.41
				PIF Total		7186.44	7173.97	8690.13	23050.54

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						Jan 05	Feb 05	Mar 05	As of 3/31/05
506	MISC STM PWR EXP	506030	MISC STM PWR EXP	PIH	150	72.28	72.28	0	144.56
					155	-0.76	4.1	0	3.34
					405	13.14	14.84	0	27.98
					406	4.8	5.14	0	9.94
					421	7.64	7.7	0	15.34
					422	15.98	15.76	0	31.74
					423	6	6.44	0	12.44
					PIH Total	119.08	126.26	0	245.34
				PIK	150	0	927.28	421.32	1348.6
					155	0	52.04	26.85	78.89
					201	0	8.62	0	8.62
					205	29.96	0	266.63	296.59
					405	0	192.92	89.04	281.96
					406	0	66.82	30.84	97.66
					421	0	100.1	46.2	146.3
					422	0	204.88	94.56	299.44
					423	0	82.45	37.75	120.2
					501	1153.81	1777.4	1859.03	4790.24
					PIK Total	1183.77	3412.51	2872.22	7468.5
				PIL	150	69.9	314.55	0	384.45
					155	-1.72	8.64	0	6.92
					201	1376.8	476.82	301.48	2155.1
					205	0	0	111.24	111.24
					405	13.14	66.78	0	79.92
					406	4.8	23.13	0	27.93
					421	7.64	34.65	0	42.29
					422	15.98	70.92	0	86.9
					423	5.72	27.22	0	32.94
					501	5146.27	15123.93	10619	30889.2
					PIL Total	6638.53	16146.64	11031.72	33816.89
				PIO	150	123.56	0	0	123.56
					155	-8.89	0	0	-8.89
					405	24.64	0	0	24.64
					406	9	0	0	9
					421	14.33	0	0	14.33
					422	29.96	0	0	29.96
					423	9.62	0	0	9.62
					501	0	0	55600	55600
					PIO Total	202.22	0	55600	55802.22
				PIP	150	2796.79	1425.9	918.46	5141.15
					155	-328.84	118.08	78.08	-132.68
					405	433.62	289.38	163.24	886.24
					406	158.4	100.24	56.55	315.19
					421	252.12	150.16	84.71	486.99
					422	527.34	307.32	173.36	1008.02
					423	207.1	130.03	83.89	421.02
					PIP Total	4046.53	2521.11	1558.29	8125.93
				PIW	150	4791.04	5601.7	5999.24	16391.98
					155	466.74	-114.97	129.91	481.68
					205	0	0	72.37	72.37
					405	893.52	1150.1	1231.72	3275.34
					406	326.4	398.35	426.62	1151.37
					421	519.52	596.75	639.1	1755.37
					422	1086.64	1221.4	1308.08	3616.12
					423	441.23	461.94	516	1419.17
					PIW Total	8525.09	9315.27	10323.04	28163.4
				PJA	150	10243.47	12700.28	10243.47	33187.22
					155	-2014.12	-2332.54	-1730.38	-6077.04
					201	0	0	33.6	33.6
					205	341.12	312.72	268	921.84
					406	765.03	938.62	833.89	2537.54
					421	1217.8	1406.03	1249.13	3872.96
					422	2547.04	2877.54	2556.51	7981.09

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506	MISC STM PWR EXP	506030	MISC STM PWR EXP	PJA	423	690.51	873.01	716.95	2280.47
					501	437.23	1827.83	924.28	3189.34
				PJA Total		14228.08	18603.49	15095.45	47927.02
				PJB	150	8611.18	7254	6840	22705.18
					155	-467.86	-389.67	-68.12	-925.65
					201	0	175.47	0	175.47
					205	0	0	80.04	80.04
					301	982.91	1171.53	983.88	3138.32
					406	597.6	517.91	488.37	1603.88
					421	951.18	775.83	731.57	2458.58
					422	1989.56	1587.82	1497.2	5074.58
					423	683.2	577.89	570.07	1831.16
					501	50825.81	50467.94	28367.91	129661.66
					508	16172.51	3060.86	0	19233.37
					520	0	0	585	585
					522	0	42.22	0	42.22
				PJB Total		80346.09	65241.8	40075.92	185663.81
				PJC	150	5473.01	2248.03	1619.58	9340.62
					155	-391.05	-236.2	-11.73	-638.98
					201	177.85	84.34	21202.83	21465.02
					205	0	1099.43	391.08	1490.51
					301	298.19	506.61	361.21	1166.01
					406	445.2	194.07	139.45	778.72
					421	708.61	290.71	208.89	1208.21
					422	1482.18	594.94	427.49	2504.61
					423	426.41	169.33	135.33	731.07
					501	0	382.81	4799.49	5182.3
					508	0	93.75	820.3	914.05
				PJC Total		8620.4	5427.82	30093.92	44142.14
				PJW	150	7504.78	7105.03	7179.91	21789.72
					155	131.8	472.91	175.33	780.04
					201	158.01	492.54	55.8	706.35
					205	0	0	307.77	307.77
					301	982.91	1171.53	983.83	3138.27
					406	578.4	574.63	582.94	1735.97
					421	920.63	860.71	873.18	2654.52
					422	1925.84	1761.18	1786.79	5473.81
					423	641.04	637.75	618.93	1897.72
					462	0	0	2196.73	2196.73
					501	89	1961.56	365.15	2415.71
					508	644.8	0	0	644.8
				PJW Total		13577.21	15037.84	15126.36	43741.41
				PNG	501	-9832	0	0	-9832
				PNG Total		-9832	0	0	-9832
				PNL	501	0	3853.86	0	3853.86
				PNL Total		0	3853.86	0	3853.86
				PNP	150	122.68	0	0	122.68
					155	30.58	0	0	30.58
					406	9.6	0	0	9.6
					421	15.28	0	0	15.28
					422	31.96	0	0	31.96
					423	12.86	0	0	12.86
				PNP Total		222.96	0	0	222.96
				PNR	150	11181.49	8731.19	9018.33	28931.01
					155	-2032.92	-2148.44	-2269.94	-6451.3
					205	24.19	126.65	0	150.84
					406	741.6	609.09	672.06	2022.75
					421	1180.38	912.45	1006.78	3099.61
					422	2468.91	1867.56	2060.62	6397.09
					423	767.51	554.31	568.12	1889.94
					501	9832	0	0	9832
					515	0	3000	0	3000
					520	0	0	-110.42	-110.42

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						Data			
NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Jan 05	Feb 05	Mar 05	As of 3/31/05
506	MISC STM PWR EXP	506030	MISC STM PWR EXP	PNR	521	0	0	-2.08	-2.08
					522	-163.2	0	0	-163.2
					900	0	0	-10811.97	-10811.97
				PNR Total		23999.96	13652.81	131.5	37784.27
				PPA	150	4225	4225	-4375	4075
					PPA Total		4225	4225	-4375
				PRE	150	64.04	0	0	64.04
					155	-0.29	0	0	-0.29
					404	55.46	0	0	55.46
					406	4.8	0	0	4.8
					421	7.64	0	0	7.64
					422	15.98	0	0	15.98
					423	5.35	0	0	5.35
				PRE Total		152.98	0	0	152.98
				PSM	150	549.3	0	0	549.3
					155	91.96	0	0	91.96
					406	43.2	0	0	43.2
					421	68.76	0	0	68.76
					422	143.82	0	0	143.82
					423	53.8	0	0	53.8
				PSM Total		950.84	0	0	950.84
				PSR	150	276.03	0	0	276.03
					155	52.82	0	0	52.82
					406	21.6	0	0	21.6
					421	34.38	0	0	34.38
					422	71.91	0	0	71.91
					423	27.58	0	0	27.58
				PSR Total		484.32	0	0	484.32
				PYB	150	743.82	2125.2	4710.86	7579.88
					155	392.33	582.8	1056.87	2032
					406	50.4	154.21	341.81	546.42
					421	80.22	231.01	512.05	823.28
					422	167.79	472.8	1048.04	1688.63
					423	95.29	227.96	485.58	808.83
					501	0	5634.59	1774.92	7409.51
					502	0	108.33	0	108.33
				PYB Total		1529.85	9536.9	9930.13	20996.88
				PYE	150	0	73.58	0	73.58
					155	0	-28.74	0	-28.74
					405	0	14.84	0	14.84
					406	0	5.14	0	5.14
					421	0	7.7	0	7.7
					422	0	15.76	0	15.76
					423	0	3.78	0	3.78
					516	65	0	0	65
				PYE Total		65	92.06	0	157.06
				PYP	150	659.01	1599.28	494.72	2753.01
					155	-20.43	-121.15	-65.44	-207.02
					201	-4.42	0	0	-4.42
					406	49.2	134.93	50.12	234.25
421	78.31	202.13	75.08		355.52				
422	163.8	413.7	153.66		731.16				
423	53.56	124.44	36.14		214.14				
501	22.86	22.91	22.91		68.68				
900	2630	2630	2630		7890				
PYP Total		3631.89	5006.24	3397.19	12035.32				
506030 Total					214819.95	210197.57	171673.38	596690.9	
506 Total					487526.93	410328.46	533467.03	1431322.42	
507	RENTS EXP - STEAM	507030	RENTS EXP-KAHE	PNL	570	15469.5	0	2915.5	18385
					PNL Total		15469.5	0	2915.5
				507030 Total					15469.5
507 Total					15469.5	0	2915.5	18385	
510	MAINT SUPV & ENG	510010	MAINT SUPV&ENG HONO	PWX	150	0	0	34.23	34.23

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510	MAINT SUPV & ENG	510010	MAINT SUPV&ENG HONO	PWX	155	0	0	1.11	1.11		
					406	0	0	2.57	2.57		
					421	0	0	3.85	3.85		
					422	0	0	7.88	7.88		
					423	0	0	2.97	2.97		
				PWX Total		0	0	52.61	52.61		
				PYE	150	0	0	331.11	331.11		
					155	0	0	-45.96	-45.96		
					405	0	0	66.78	66.78		
					406	0	0	23.13	23.13		
					421	0	0	34.65	34.65		
					422	0	0	70.92	70.92		
					423	0	0	24.01	24.01		
				PYE Total		0	0	504.64	504.64		
				510010 Total		0	0	557.25	557.25		
				510020	MAINT SUPV&ENG WAIU	PYE	150	257.53	588.64	809.38	1655.55
							155	-35.75	-87.9	-112.35	-236
							405	45.99	118.72	163.24	327.95
							406	16.8	41.12	56.54	114.46
							421	26.74	61.6	84.7	173.04
							422	55.93	126.08	173.36	355.37
							423	18.61	42.16	58.7	119.47
						PYE Total		385.85	890.42	1233.57	2509.84
				510020 Total		385.85	890.42	1233.57	2509.84		
		510030	MAINT SUPV&ENG KAHE	PJW	150	0	153.88	0	153.88		
					155	0	34.16	0.73	34.89		
					406	0	12.23	0	12.23		
					421	0	18.31	0	18.31		
					422	0	37.43	0	37.43		
					423	0	15.81	0.06	15.87		
				PJW Total		0	271.82	0.79	272.61		
				PNG	150	3171.14	3671.74	0	6842.88		
					155	466.1	747.62	16.12	1229.84		
					406	231.6	299.41	0	531.01		
					421	368.63	448.53	0	817.16		
					422	771.05	918.02	0	1689.07		
					423	305.18	372.09	1.36	678.63		
					501	0	0	364.58	364.58		
				PNG Total		5313.7	6457.41	382.06	12153.17		
				PYE	150	0	0	110.37	110.37		
					155	0	0	-15.32	-15.32		
					405	0	0	22.26	22.26		
					406	0	0	7.71	7.71		
					421	0	0	11.55	11.55		
					422	0	0	23.64	23.64		
					423	0	0	8	8		
				PYE Total		0	0	168.21	168.21		
		510030 Total		5313.7	6729.23	551.06	12593.99				
510 Total						5699.55	7619.65	2341.88	15661.08		
511	MAINT STRUCTURES	511010	MAINT STRUCT HONO	PBT	150	0	435.11	267.76	702.87		
					155	0	39.48	28.78	68.26		
					404	0	375.44	231.04	606.48		
					406	0	33.41	20.56	53.97		
					421	0	50.05	30.8	80.85		
					422	0	102.44	63.04	165.48		
					423	0	39.95	24.96	64.91		
					PBT Total		0	1075.88	666.94	1742.82	
				PIH	150	6399.81	5552.4	6081.2	18033.41		
					155	-19.24	-13.46	170.36	137.66		
					405	1286.97	1246.56	1365.28	3898.81		
					406	440.48	431.76	472.88	1345.12		
					421	763.34	646.8	708.4	2118.54		
					422	1417.17	1323.84	1449.92	4190.93		

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						Jan 05	Feb 05	Mar 05	As of 3/31/05
511	MAINT STRUCTURES	511010	MAINT STRUCT HONO	PIH	423	530.89	466.68	526.68	1524.25
				PIH Total		10819.42	9654.58	10774.72	31248.72
				PIL	150	0	0	733.97	733.97
					155	0	0	-53.06	-53.06
					405	0	0	155.82	155.82
					406	0	0	53.99	53.99
					421	0	0	80.87	80.87
					422	0	0	165.48	165.48
					423	0	0	57.34	57.34
				PIL Total		0	0	1194.41	1194.41
				PIN	150	2198.1	6661.35	4661.25	13520.7
					155	-26.31	-237.43	-106.76	-370.5
					201	1553.82	1043.28	2666.51	5263.61
					205	86.18	0	924.09	1010.27
					405	428.96	1458.03	1020.25	2907.24
					406	143.79	505.17	353.52	1002.48
					421	255.89	756.69	529.52	1542.1
					422	457.43	1548.42	1083.5	3089.35
					423	180.07	540.83	383.38	1104.28
					501	15000	0	9371.93	24371.93
				PIN Total		20277.93	12276.34	20887.19	53441.46
				PIT	150	1072.35	1137.39	136.16	2345.9
					155	-68.31	-96.64	14.25	-150.7
					405	204.17	244.86	29.68	478.71
					406	71.44	84.86	10.28	166.58
					421	120.26	127.1	15.4	262.76
					422	232.71	260.04	31.52	524.27
					423	83.57	87.61	12.66	183.84
				PIT Total		1716.19	1845.22	249.95	3811.36
			511010 Total			32813.54	24852.02	33773.21	91438.77
			511020 MAINT STRUCT WAIU	PBT	150	62.48	602.46	334.7	999.64
					155	8.03	-9.68	-5.37	-7.02
					404	55.46	519.84	288.8	864.1
					406	4.8	46.26	25.7	76.76
					421	7.64	69.3	38.5	115.44
					422	15.98	141.84	78.8	236.62
					423	5.91	49.89	27.72	83.52
				PBT Total		160.3	1419.91	788.85	2369.06
				PIL	150	0	139.8	0	139.8
					155	0	-7.84	0	-7.84
					405	0	29.68	0	29.68
					406	0	10.28	0	10.28
					421	0	15.4	0	15.4
					422	0	31.52	0	31.52
					423	0	11.12	0	11.12
				PIL Total		0	229.96	0	229.96
				PIT	150	0	34.04	0	34.04
					155	0	5.97	0	5.97
					405	0	7.42	0	7.42
					406	0	2.57	0	2.57
					421	0	3.85	0	3.85
					422	0	7.88	0	7.88
					423	0	3.37	0	3.37
				PIT Total		0	65.1	0	65.1
				PIW	150	6028.78	5366.46	5945.28	17340.52
					155	-217.09	-238.69	-210.11	-665.89
					405	1210.08	1202.04	1331.3	3743.42
					406	413.95	416.34	461.11	1291.4
					421	717.84	623.7	690.76	2032.3
					422	1331.44	1276.56	1413.83	4021.83
					423	483.46	431.98	483.39	1398.83
				PIW Total		9968.46	9078.39	10115.56	29162.41
				PIX	150	9551.51	11022.34	9209.83	29783.68

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511	MAINT STRUCTURES	511020	MAINT STRUCT WAIU	PIX	155	523.68	717.49	301.7	1542.87
					201	11538.64	11416.88	9484.11	32439.63
					205	1226.68	575.76	816.42	2618.86
					405	1804.97	2329.88	1947.75	6082.6
					406	626.15	807.15	674.77	2108.07
					421	1066.23	1209.07	1010.77	3286.07
					422	2029.59	2474.32	2068.5	6572.41
					423	839.42	988.51	800.89	2628.82
					501	115043.9	19312.58	127005.91	261362.39
				PIX Total		144250.77	50853.98	153320.65	348425.4
				PVL	150	126.04	189.06	0	315.1
					155	-7.72	-3.11	0	-10.83
					404	110.92	173.28	0	284.2
					406	9.6	15.42	0	25.02
					421	15.28	23.1	0	38.38
					422	31.96	47.28	0	79.24
					423	9.92	15.66	0	25.58
				PVL Total		296	460.69	0	756.69
		511020 Total				154675.53	62108.03	164225.06	381008.62
		511030	MAINT STRUCT KAHE	PBT	150	0	535.52	536.53	1072.05
					155	-2.41	48.01	35.07	80.67
					404	0	462.08	548.72	1010.8
					406	0	41.12	48.83	89.95
					421	0	61.6	73.15	134.75
					422	0	126.08	149.72	275.8
					423	-0.2	49.11	48.12	97.03
					501	0	0	141665.77	141665.77
				PBT Total		-2.61	1323.52	143105.91	144426.82
				PIK	150	5745.75	5254.95	5949	16949.7
					155	350.17	-11.29	-17.5	321.38
					405	1153.49	1179.78	1335.6	3668.87
					406	394.84	408.63	462.6	1266.07
					421	684.14	612.15	693	1989.29
					422	1270.41	1252.92	1418.4	3941.73
					423	507.48	441.79	499.74	1449.01
				PIK Total		10106.28	9138.93	10340.84	29586.05
				PIL	150	2684.01	6238.58	6133.73	15056.32
					155	91.81	260.55	143.03	495.39
					201	8908.79	6939.19	4852.31	20700.29
					205	324.57	199.72	581.79	1106.08
					405	506.33	1324.47	1302.21	3133.01
					406	181.84	458.75	451.04	1091.63
					421	295.98	687.23	675.68	1658.89
					422	600.19	1406.58	1382.94	3389.71
					423	232.25	547.23	528.57	1308.05
					501	40425.19	8393.16	21897.26	70715.61
				PIL Total		54250.96	26455.46	37948.56	118654.98
				PIO	150	329.5	65.9	0	395.4
					155	-10.8	-29.04	0	-39.84
					405	65.7	14.84	0	80.54
					406	24	5.14	0	29.14
					421	38.2	7.7	0	45.9
					422	79.9	15.76	0	95.66
					423	26.73	3.1	0	29.83
				PIO Total		553.23	83.4	0	636.63
				PIT	150	0	0	272.32	272.32
					155	28.21	0	43.74	71.95
					405	0	0	59.36	59.36
					406	0	0	20.56	20.56
					421	0	0	30.8	30.8
					422	0	0	63.04	63.04
					423	2.37	0	26.6	28.97
				PIT Total		30.58	0	516.42	547

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511	MAINT STRUCTURES	511030	MAINT STRUCT KAHE	PIX	150	0	175.36	70.14	245.5
					155	0	28.77	-13.19	15.58
					405	0	37.1	14.84	51.94
					406	0	12.86	5.14	18
					421	0	19.26	7.7	26.96
					422	0	39.4	15.76	55.16
					423	0	17.18	4.79	21.97
					PIX Total	0	329.93	105.18	435.11
					511030 Total	64938.44	37331.24	192016.91	294286.59
					511 Total	252427.51	124291.29	390015.18	766733.98
512	MAINT BLR & FO PLT	512010	MAINT BLR&FO PLT HON	PIH	150	0	0	216.84	216.84
					155	0	0	-5.52	-5.52
					405	0	0	44.52	44.52
					406	0	0	15.42	15.42
					421	0	0	23.1	23.1
					422	0	0	47.28	47.28
					423	0	0	17.8	17.8
					PIH Total	0	0	359.44	359.44
					PIL	150	0	0	1817.43
						155	0	0	-59.86
						405	0	0	385.84
						406	0	0	133.67
						421	0	0	200.23
						422	0	0	409.76
						423	0	0	147.98
					PIL Total	0	0	3035.05	3035.05
					PIN	150	13815.45	11119.2	15848.25
						155	-240.68	-348.43	-852.11
						201	10302.6	24483.6	10987.67
						205	92.5	428.24	47.97
						301	916.8	1344.32	18921.48
						405	2694.33	2433.76	3468.85
						406	911.21	843.2	1201.83
						421	1603.48	1263.04	1800.23
						422	2912.61	2584.64	3683.9
						423	1126.67	906.82	1262.7
						501	-58446.28	15828.49	4387.91
					PIN Total	-24311.31	60886.88	60758.68	97334.25
					PIP	150	561.54	854.25	249.85
						155	69.81	-19.25	34.44
						405	114.99	189.21	59.36
						406	42	65.55	20.58
						421	66.85	98.19	30.82
						422	139.84	200.94	63.04
						423	52.97	70.3	23.93
					PIP Total	1048	1459.19	482.02	2989.21
					PIT	150	3836.02	2105.79	1154.04
						155	-147.42	-117.28	40.16
						405	721.33	448.91	244.86
						406	250.22	155.53	84.81
						421	426.11	232.97	127.05
						422	811.06	476.74	260.04
						423	307.03	167.41	100.56
					PIT Total	6204.35	3470.07	2011.52	11685.94
					PIX	150	280.56	1034.57	0
						155	67.14	242.29	33.09
						405	52.56	218.89	0
						406	19.2	75.82	0
						421	30.56	113.58	0
						422	63.92	232.46	0
						423	29.17	107.49	2.8
					PIX Total	543.11	2025.1	35.89	2604.1
					PJB	150	288	684	1656

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NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
512	MAINT BLR & FO PLT	512010	MAINT BLR&FO PLT HON	PJB	155	-27.23	-95.95	-175.64	-298.82
					406	19.2	48.84	118.24	186.28
					421	30.56	73.16	177.12	280.84
					422	63.92	149.72	362.48	576.12
					423	21.87	49.51	124.63	196.01
				PJB Total		396.32	909.28	2262.83	3568.43
				PYE	150	160.65	0	73.58	234.23
					155	6.18	0	13.24	19.42
					405	32.85	0	14.84	47.69
					406	12	0	5.14	17.14
					421	19.1	0	7.7	26.8
					422	39.95	0	15.76	55.71
					423	14	0	7.32	21.32
				PYE Total		284.73	0	137.58	422.31
				PYM	150	60.44	72.38	24.25	157.07
					155	-7.45	-8.92	-3	-19.37
					405	10.97	14.84	4.97	30.78
					406	4.01	5.14	1.73	10.88
					421	6.38	7.7	2.58	16.66
					422	13.34	15.76	5.28	34.38
					423	4.45	5.34	1.79	11.58
				PYM Total		92.14	112.24	37.6	241.98
			512010 Total			-15742.66	68862.76	69120.61	122240.71
		512020	MAINT BLR&FO PLT WAI	PBT	150	98.18	33.47	267.76	399.41
					155	4.57	1.84	-4.3	2.11
					404	83.19	28.88	231.04	343.11
					406	7.2	2.57	20.56	30.33
					421	11.46	3.85	30.8	46.11
					422	23.97	7.88	63.04	94.89
					423	8.62	2.98	22.18	33.78
				PBT Total		237.19	81.47	631.08	949.74
				PIA	150	888.13	989.63	0	1877.76
					155	-167.94	-187.13	0	-355.07
					405	114.98	144.69	0	259.67
					406	42	50.12	0	92.12
					421	66.85	75.08	0	141.93
					422	139.83	153.66	0	293.49
					423	60.41	67.59	0	128
				PIA Total		1144.26	1293.64	0	2437.9
				PIL	150	489.3	1467.9	279.6	2236.8
					155	-35.07	-60.99	32.81	-63.25
					405	91.98	311.64	59.36	462.98
					406	33.6	107.94	20.56	162.1
					421	53.48	161.7	30.8	245.98
					422	111.86	330.96	63.04	505.86
					423	38.11	118.51	26.31	182.93
				PIL Total		783.26	2437.66	512.48	3733.4
				PIM	150	524.75	0	501.93	1026.68
					155	-160.92	0	-93.4	-254.32
					201	157.2	1058.94	230.88	1447.02
					205	0	122.15	233.27	355.42
					301	916.8	1344.32	1072.61	3333.73
					405	75.56	0	81.62	157.18
					406	27.6	0	28.27	55.87
					421	43.93	0	42.35	86.28
					422	91.89	0	86.68	178.57
					423	30.53	0	34.4	64.93
					501	10286	442	2600	13328
				PIM Total		11993.34	2967.41	4818.61	19779.36
				PIN	150	0	440.7	203.4	644.1
					155	0	-7.36	-6.52	-13.88
					405	0	96.46	44.52	140.98
				406		0	33.41	15.42	48.83

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NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
512	MAINT BLR & FO PLT	512020	MAINT BLR&FO PLT WAI	PIN	421	0	50.05	23.1	73.15
					422	0	102.44	47.28	149.72
					423	0	36.5	16.59	53.09
				PIN Total		0	752.2	343.79	1095.99
				PIO	150	0	0	616.01	616.01
					155	0	0	-122.73	-122.73
					405	0	0	100.17	100.17
					406	0	0	34.7	34.7
					421	0	0	51.98	51.98
					422	0	0	106.38	106.38
					423	0	0	41.54	41.54
				PIO Total		0	0	828.05	828.05
				PIP	150	14383.86	12239.11	13588.61	40211.58
					155	54.03	-124.47	-445.34	-515.78
					405	3014.1	2880.82	3173.91	9068.83
					406	1101	997.87	1099.39	3198.26
					421	1752.43	1494.83	1646.91	4894.17
					422	3665.53	3059.41	3370.67	10095.61
					423	1211.35	1020.12	1106.66	3338.13
				PIP Total		25182.3	21567.69	23540.81	70290.8
				PIT	150	41514.29	130175.83	126557.8	298247.92
					155	3964.42	11745.89	8209.64	23919.95
					201	16550.95	65772.73	117074.21	199397.89
					205	2530.55	6567.91	9061.07	18159.53
					301	618.61	837.71	711.4	2167.72
					405	7901.16	27748.95	27142.37	62792.48
					406	2811.73	9611.46	9401.3	21824.49
					421	4631.75	14398.34	14083.54	33113.63
					422	9237.02	29469.23	28825.04	67531.29
					423	3803.73	11949.53	11346.97	27100.23
					501	102916.3	29392.37	150321.5	282630.17
				PIT Total		196480.51	337669.95	502734.84	1036885.3
				PIW	150	867.36	7046.94	5333.9	13248.2
					155	0.16	-157.51	-131.61	-288.96
					201	0	178.63	0	178.63
					405	157.69	1446.82	1095.12	2699.63
					406	57.6	501.12	379.32	938.04
					421	91.68	750.73	568.23	1410.64
					422	191.77	1536.52	1163.01	2891.3
					423	72.79	580.09	438.05	1090.93
				PIW Total		1439.05	11883.34	8846.02	22168.41
				PIX	150	44216.44	54935.89	60558.9	159711.23
					155	704.01	3232.54	2171.54	6108.09
					201	19707.45	58499.89	69725	147932.34
					205	1029.21	4903.23	2476.96	8409.4
					301	3897.34	3842.06	3163.31	10902.71
					405	8356.72	11586.33	12773.53	32716.58
					406	2801.69	4013.83	4425.42	11240.94
					421	4985.92	6012.55	6628.94	17627.41
					422	8911.08	12304.62	13565.42	34781.12
					423	3725.65	4897.89	5282.11	13905.65
					501	53923.55	116865.01	119847.83	290636.39
				PIX Total		152259.06	281093.84	300618.96	733971.86
				PRX	150	3321	778.02	0	4099.02
					155	74.9	182.9	0	257.8
					404	2495.7	606.48	0	3102.18
					406	216	53.97	0	269.97
					421	343.8	80.85	0	424.65
					422	719.1	165.48	0	884.58
					423	284.93	80.89	0	365.82
				PRX Total		7455.43	1948.59	0	9404.02
				PYB	150	0	106.26	0	106.26
					155	0	49.2	0	49.2

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NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
512	MAINT BLR & FO PLT	512020	MAINT BLR&FO PLT WAI	PYB	406	0	7.71	0	7.71
					421	0	11.55	0	11.55
					422	0	23.64	0	23.64

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					Data
INADL0	INADL0 Data	INADL0 Data	INADL0 Data	INADL0 Data	INADL0 Data

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						Data						
NARUC	NARUC Descr	GL INT N	Inter Code Descr	RA	EE	Jan 05	Feb 05	Mar 05	As of 3/31/05			
512	MAINT BLR & FO PLT	512030	MAINT BLR&FO PLT KAH	PYE	406	506.4	326.39	591.1	1423.89			
					421	806.02	488.95	885.5	2180.47			
					422	1685.89	1000.76	1812.4	4499.05			
					423	594.82	366.27	628.23	1589.32			
				PYE Total					12069.01	7474.52	13084.87	32628.4
				PYM	150	1327.09	1049.51	1037.57	3414.17			
					155	-84.28	107.87	-431.66	-408.07			
					405	240.92	215.18	212.73	668.83			
					406	88.01	74.53	73.69	236.23			
					421	140.08	111.65	110.38	362.11			
					422	292.99	228.52	225.92	747.43			
					423	104.3	97.46	51.07	252.83			
				PYM Total					2109.11	1884.72	1279.7	5273.53
		512030 Total					874454.63	819764.63	584047.40	1600000.11		

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NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
513	MAINT ELEC PLT	513010	MAINT ELEC PLT HONO	PIX	422	0	118.2	0	118.2
					423	0	53.1	0	53.1
				PIX Total		0	1009.69	0	1009.69
		513010 Total				13691.71	10803.09	15374.74	39869.54
		513020	MAINT ELEC PLT WAIU	PBA	150	0	22.28	0	22.28
					155	0	-3.14	0	-3.14
					404	0	28.88	0	28.88
					406	0	2.57	0	2.57
					421	0	3.85	0	3.85
					422	0	7.88	0	7.88
					423	0	1.62	0	1.62
				PBA Total		0	63.94	0	63.94
				PCG	155	0	0	22.53	22.53
					423	0	0	1.9	1.9
				PCG Total		0	0	24.43	24.43
				PCM	150	0	0	34.61	34.61
					155	0	0	-6.19	-6.19
					406	0	0	3.86	3.86
					421	0	0	5.78	5.78
					422	0	0	11.82	11.82
					423	0	0	2.39	2.39
				PCM Total		0	0	52.27	52.27
				PDD	155	0	0	-39.76	-39.76
					423	0	0	-3.34	-3.34
				PDD Total		0	0	-43.1	-43.1
				PDF	150	0	182.05	406.7	588.75
					155	0	31.39	-4.39	27
					404	0	144.4	322.59	466.99
					406	0	12.85	28.71	41.56
					421	0	19.25	43.01	62.26
					422	0	39.4	88.02	127.42
					423	0	17.99	33.88	51.87
				PDF Total		0	447.33	918.52	1365.85
				PHB	150	0	0	422.24	422.24
					155	0	0	74.7	74.7
					406	0	0	41.12	41.12
					421	0	0	61.6	61.6
					422	0	0	126.08	126.08
					423	0	0	41.84	41.84
				PHB Total		0	0	767.58	767.58
				PIL	150	0	1083.45	139.8	1223.25
					155	0	41.27	6.95	48.22
					405	0	230.02	29.68	259.7
					406	0	79.67	10.28	89.95
					421	0	119.35	15.4	134.75
					422	0	244.28	31.52	275.8
					423	0	94.7	12.36	107.06
				PIL Total		0	1892.74	245.99	2138.73
				PIM	150	0	91.26	0	91.26
					155	0	-40.31	0	-40.31
					201	104.38	3.38	182.31	290.07
					405	0	14.84	0	14.84
					406	0	5.14	0	5.14
					421	0	7.7	0	7.7
					422	0	15.76	0	15.76
					423	0	4.29	0	4.29
					501	609.76	2590.64	5382	8582.4
				PIM Total		714.14	2692.7	5564.31	8971.15
				PIN	150	0	33.9	237.3	271.2
					155	0	-1.1	4.21	3.11
					405	0	7.42	51.94	59.36
					406	0	2.58	17.99	20.57
					421	0	3.86	26.95	30.81

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NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Data				
						Jan 05	Feb 05	Mar 05	As of 3/31/05	
513	MAINT ELEC PLT	513020	MAINT ELEC PLT WAI'AU	PIN	422	0	7.88	55.16	63.04	
					423	0	2.77	20.34	23.11	
				PIN Total		0	57.31	413.89	471.2	
				PIP	150	1970.76	2561.52	1134.35	5666.63	
					155	1.45	45.94	15.88	63.27	
					405	417.2	578.76	261.56	1257.52	
					406	152.4	200.52	90.61	443.53	
					421	242.57	300.36	135.73	678.66	
					422	507.37	614.64	277.77	1399.78	
					423	165.48	219.53	96.85	481.86	
				PIP Total		3457.23	4521.27	2012.75	9991.25	
				PIT	150	17998.26	31772.43	44589.55	94360.24	
					155	143.69	2712.21	299.6	3155.5	
					201	15756.79	16920.08	26826.63	59503.5	
					205	0	0	2108.64	2108.64	
					301	1855.84	1675.42	1422.8	4954.06	
					405	3413.04	6650.19	9408.57	19471.8	
					406	1224.14	2303.42	3258.86	6786.42	
					421	1995.92	3450.62	4881.9	10328.44	
					422	4037.79	7062.45	9991.84	21092.08	
					423	1518.68	2904.16	3779.69	8202.53	
					501	7823.58	13617.72	81281.57	102722.87	
					PIT Total		55767.73	89068.7	187849.65	332686.08
					PIW	150	0	0	264.4	264.4
				155		0	0	35.12	35.12	
				405		0	0	59.36	59.36	
				406		0	0	20.56	20.56	
				421		0	0	30.8	30.8	
				422		0	0	63.04	63.04	
				423		0	0	25.22	25.22	
				PIW Total		0	0	498.5	498.5	
				PIX	150	26297.62	15549.34	22164.46	64011.42	
					155	274.96	859.87	1662.98	2797.81	
					201	8572.63	5367.01	66393.48	80333.12	
					205	434.52	1357.54	676.69	2468.75	
					301	1237.23	1675.42	1422.8	4335.45	
					404	0	0	245.48	245.48	
					405	4946.92	3283.35	4574.43	12804.7	
					406	1693.9	1137.52	1628.34	4459.76	
					421	2933.61	1703.92	2439.22	7076.75	
					422	5451.53	3486.9	4991.98	13930.41	
					423	2209.68	1381.69	2006.38	5597.75	
					501	13917.03	0	23225.9	37142.93	
					PIX Total		67969.63	35802.56	131432.14	235204.33
				PRR	150	0	3025	5462.96	8487.96	
					155	0	-59.11	-39.83	-98.94	
					205	0	140.35	0	140.35	
					404	0	2656.96	4577.48	7234.44	
					406	0	236.44	407.35	643.79	
					421	0	354.2	610.23	964.43	
					422	0	724.96	1248.98	1973.94	
					423	0	249.75	456.71	706.46	
				PRR Total		0	7328.55	12723.88	20052.43	
				PRS	150	0	5190.93	6296.29	11487.22	
					155	0	-241.87	-259.79	-501.66	
					404	0	4452.43	5400.56	9852.99	
					406	0	396.19	480.59	876.78	
					421	0	593.56	719.95	1313.51	
					422	0	1214.86	1473.56	2688.42	
					423	0	416.69	508.3	924.99	
				PRS Total		0	12022.79	14619.46	26642.25	
				PVL	150	0	519.92	0	519.92	
					155	0	-11.88	0	-11.88	

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						Data					
NARUC	NARUC Descr	GL INT N	Inter Code Descr	RA	EE	Jan 05	Feb 05	Mar 05	As of 3/31/05		
513	MAINT ELEC PLT	513020	MAINT ELEC PLT WAIU	PVL	404	0	476.52	0	476.52		
					406	0	42.41	0	42.41		
					421	0	63.53	0	63.53		
					422	0	130.02	0	130.02		
					423	0	42.79	0	42.79		
				PVL Total		0	1263.31	0	1263.31		
				PYE	150	110.37	1066.91	2060.24	3237.52		
					155	-36.82	-297.37	-560.78	-894.97		
					405	19.71	215.18	415.52	650.41		
					406	7.2	74.53	143.92	225.65		
					421	11.46	111.65	215.6	338.71		
					422	23.97	228.52	441.28	693.77		
					423	6.17	64.82	126.32	197.31		
				PYE Total		142.06	1464.24	2842.1	4448.4		
				PYF	150	130.35	30.1	0	160.45		
					155	31.68	5.96	0	37.64		
					405	29.57	7.42	0	36.99		
					406	10.8	2.57	0	13.37		
					421	17.19	3.85	0	21.04		
					422	35.96	7.88	0	43.84		
					423	13.6	3.03	0	16.63		
				PYF Total		269.15	60.81	0	329.96		
				PYG	150	317.7	63.32	253.28	634.3		
					155	-25.26	-3.3	-23.69	-52.25		
					405	65.7	14.84	59.36	139.9		
					406	24	5.14	20.56	49.7		
					421	38.2	7.7	30.8	76.7		
					422	79.9	15.76	63.04	158.7		
					423	24.54	5.05	19.32	48.91		
				PYG Total		524.78	108.51	422.67	1055.96		
				PYM	150	1266.65	253.33	325.71	1845.69		
					155	69.44	13.88	17.84	101.16		
					405	229.95	51.94	66.78	348.67		
					406	84	17.99	23.13	125.12		
					421	133.7	26.95	34.65	195.3		
					422	279.65	55.16	70.92	405.73		
					423	112.07	22.5	28.94	163.51		
				PYM Total		2175.46	441.75	567.97	3185.18		
		513020 Total						131020.18	157236.51	360913.01	649169.7
		513030	MAINT ELEC PLT KAHE	PBT	150	1850.92	803.28	0	2654.2		
					155	9.79	-12.88	0	-3.09		
					404	1566.75	693.12	0	2259.87		
					406	135.6	61.68	0	197.28		
					421	215.83	92.4	0	308.23		
					422	451.44	189.12	0	640.56		
					423	156.11	66.56	0	222.67		
				PBT Total		4386.44	1893.28	0	6279.72		
				PCM	150	0	0	161.49	161.49		
					155	0	0	-28.86	-28.86		
					406	0	0	17.99	17.99		
					421	0	0	26.95	26.95		
					422	0	0	55.16	55.16		
					423	0	0	11.17	11.17		
				PCM Total		0	0	243.9	243.9		
				PDF	150	142.74	0	0	142.74		
					155	16.15	0	0	16.15		
					404	102.2	0	0	102.2		
					406	8.12	0	0	8.12		
					421	16.2	0	0	16.2		
					422	24.44	0	0	24.44		
					423	13.05	0	0	13.05		
				PDF Total		322.9	0	0	322.9		
		PIL		150	42191.71	26632.14	30325.81	99149.66			

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						Data							
NARUC	NARUC Descr	GL INT #	Inter Code Descr	RA	EE	Jan 05	Feb 05	Mar 05	As of 3/31/05				
513	MAINT ELEC PLT	513030	MAINT ELEC PLT KAHE	PIL	155	394.19	196.13	-1336.96	-746.64				
					201	100143	22983.52	26819.78	149946.3				
					205	827.24	2491.05	1329.17	4647.46				
					301	1237.23	1675.42	1422.8	4335.45				
					405	7968.1	5654.04	6433.14	20055.28				
					406	2804.56	1958.58	2228.32	6991.46				
					421	4686.67	2933.94	3338.08	10958.69				
					422	9160.71	6004.56	6831.96	21997.23				
					423	3554.49	2258.85	2440.95	8254.29				
					501	16714.42	11861.72	32401.09	60977.23				
				PIL Total					189682.32	84649.95	112234.14	386566.41	
				PIM	150	524.75	0	0	524.75				
					155	-160.92	0	0	-160.92				
					405	75.56	0	0	75.56				
					406	27.6	0	0	27.6				
					421	43.93	0	0	43.93				
					422	91.89	0	0	91.89				
					423	30.52	0	0	30.52				
				PIM Total					633.33	0	0	633.33	
				PIO	150	0	0	626.05	626.05				
					155	0	0	-42.36	-42.36				
					405	0	0	140.98	140.98				
					406	0	0	48.83	48.83				
					421	0	0	73.15	73.15				
					422	0	0	149.72	149.72				
					423	0	0	49.14	49.14				
				PIO Total					0	0	1045.51	1045.51	
				PIP	150	2714.33	1942.18	788.41	5444.92				
					155	-43.11	72.35	16.56	45.8				
					405	551.92	437.78	181.79	1171.49				
					406	201.6	151.66	62.97	416.23				
					421	320.88	227.18	94.33	642.39				
					422	671.2	464.92	193.06	1329.18				
					423	224.12	169.64	67.79	461.55				
				PIP Total					4640.94	3465.71	1404.91	9511.56	
				PIT	150	56310.23	4866.06	11589.92	72766.21				
					155	1827.27	1004.53	-1289.67	1542.13				
					201	0	0	8.15	8.15				
					301	1347.22	1505.34	1256.27	4108.83				
					405	10216.22	1057.35	2522.8	13796.37				
					406	3453.79	366.24	873.79	4693.82				
					421	6081.17	548.64	1308.99	7938.8				
					422	11036.19	1122.9	2679.2	14838.29				
					423	4828.23	494.28	867.34	6189.85				
				PIT Total					95100.32	10965.34	19816.79	125882.45	
				PIX	150	269.68	0	52.61	322.29				
					155	-2.46	0	0.21	-2.25				
					405	53.44	0	11.13	64.57				
					406	13.28	0	3.86	17.14				
					421	34.24	0	5.78	40.02				
					422	33.84	0	11.82	45.66				
					423	21.36	0	4.45	25.81				
				PIX Total					423.38	0	89.86	513.24	
				PKM					901	409.25	409.25	409.25	1227.75
				PKM Total					409.25	409.25	409.25	1227.75	
				PRR	150	382.44	0	0	382.44				
					155	35.18	0	0	35.18				
					404	280.44	0	0	280.44				
					406	19.92	0	0	19.92				
					421	51.36	0	0	51.36				
					422	50.76	0	0	50.76				
					423	33.55	0	0	33.55				
				PRR Total					853.65	0	0	853.65	

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						Data			
NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Jan 05	Feb 05	Mar 05	As of 3/31/05
513	MAINT ELEC PLT	513030	MAINT ELEC PLT KAHE	PYE	150	4367.71	0	0	4367.71
					155	-1023.05	0	0	-1023.05
					405	794.97	0	0	794.97
					406	290.4	0	0	290.4
					421	462.22	0	0	462.22
					422	966.79	0	0	966.79
					423	280.58	0	0	280.58
				PYE Total		6139.62	0	0	6139.62
				PYM	150	1230.46	72.38	0	1302.84
					155	-347.76	-20.46	0	-368.22
					405	223.38	14.84	0	238.22
					406	81.6	5.14	0	86.74
					421	129.88	7.7	0	137.58
					422	271.66	15.76	0	287.42
					423	74.07	4.37	0	78.44
				PYM Total		1663.29	99.73	0	1763.02
		513030 Total					304255.44	101483.26	135244.36
513 Total						448967.33	269522.86	511532.11	1230022.3
514	MAINT MISC STM PL	514010	MAINT MISC PLT HONO	PIH	150	181.72	0	0	181.72
					155	7.79	0	0	7.79
					405	36.14	0	0	36.14
					406	13.2	0	0	13.2
					421	21.01	0	0	21.01
					422	43.95	0	0	43.95
					423	15.91	0	0	15.91
				PIH Total		319.72	0	0	319.72
				PIL	150	0	0	419.42	419.42
					155	0	0	-18.34	-18.34
					405	0	0	89.04	89.04
					406	0	0	30.86	30.86
					421	0	0	46.22	46.22
					422	0	0	94.56	94.56
					423	0	0	33.75	33.75
				PIL Total		0	0	695.51	695.51
				PIN	150	5310.6	7356.3	7254.6	19921.5
					155	-52.38	-173.17	-224.71	-450.26
					201	7554.78	1892.05	3583.27	13030.1
					205	171.02	561.82	2.91	735.75
					405	1033.49	1610.14	1587.88	4231.51
					406	363.85	557.76	550.11	1471.72
					421	607.79	835.52	824.03	2267.34
					422	1188.72	1709.96	1686.32	4585
					423	438.81	604.77	591.86	1635.44
					501	11686.41	0	10379.25	22065.66
				PIN Total		28303.09	14955.15	26235.52	69493.76
				PIP	150	0	454.3	0	454.3
					155	0	26.76	-17.35	9.41
					405	0	109.45	0	109.45
					406	0	37.92	0	37.92
					421	0	56.8	0	56.8
					422	0	116.23	0	116.23
					423	0	40.51	-1.45	39.06
				PIP Total		0	841.97	-18.8	823.17
				PIT	150	932.51	1163.83	0	2096.34
					155	-50.54	-100.54	6.16	-144.92
					405	177.64	244.86	0	422.5
					406	63.32	84.83	0	148.15
					421	104.06	127.07	0	231.13
					422	208.24	260.04	0	468.28
					423	73.72	89.52	0.52	163.76
				PIT Total		1508.95	1869.61	6.68	3385.24
				PIW	150	0	385.61	0	385.61
					155	0	-9.62	0	-9.62

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						Jan 05	Feb 05	Mar 05	As of 3/31/05
514	MAINT MISC STM PL	514010	MAINT MISC PLT HONO	PIW	405	0	79.17	0	79.17
					406	0	27.42	0	27.42
					421	0	41.08	0	41.08
					422	0	84.08	0	84.08
					423	0	31.66	0	31.66
				PIW Total		0	639.4	0	639.4
				PRI	150	64.38	0	0	64.38
					155	-1.82	0	0	-1.82
					404	55.46	0	0	55.46
					406	4.8	0	0	4.8
					421	7.64	0	0	7.64
					422	15.98	0	0	15.98
					423	5.25	0	0	5.25
				PRI Total		151.69	0	0	151.69
				PYE	150	147.16	294.32	441.48	882.96
					155	-20.43	4.53	-61.29	-77.19
					405	26.28	59.36	89.04	174.68
					406	9.6	20.56	30.84	61
					421	15.28	30.8	46.2	92.28
					422	31.96	63.04	94.56	189.56
					423	10.64	25.19	32.01	67.84
				PYE Total		220.49	497.8	672.84	1391.13
		514010 Total		30503.94	18803.93	27591.75	76899.62		
		514020	MAINT MISC PLT WAI	PFS	150	0	0	52.78	52.78
					155	0	0	7.02	7.02
					406	0	0	5.14	5.14
					421	0	0	7.7	7.7
					422	0	0	15.76	15.76
					423	0	0	5.03	5.03
				PFS Total		0	0	93.43	93.43
				PIL	155	-3.57	0	0	-3.57
					423	-0.3	0	0	-0.3
				PIL Total		-3.87	0	0	-3.87
				PIP	150	8658.82	7283.06	16409.92	32351.8
					155	-1397.61	-890.83	-1830.66	-4119.1
					301	298.19	506.61	361.21	1166.01
					405	1793.65	1665.79	3865.82	7325.26
					406	655.2	577.02	1339.07	2571.29
					421	1042.86	864.38	2005.95	3913.19
					422	2181.31	1769.06	4105.48	8055.85
					423	609.2	538.19	1227.57	2374.96
				PIP Total		13841.62	12313.28	27484.36	53639.26
				PIT	150	3931.52	2284.96	2821.06	9037.54
					155	-238.08	-170.09	-251.79	-659.96
					405	718.33	471.17	582.47	1771.97
					406	246.8	163.2	201.76	611.76
					421	425.58	244.48	302.24	972.3
					422	795.71	500.38	618.58	1914.67
					423	307.04	178.03	216.32	701.39
					501	0	0	1838.74	1838.74
				PIT Total		6186.9	3672.13	6329.38	16188.41
				PIX	150	10629.36	10530.6	11655.73	32815.69
					155	1239.48	1931.11	1705.61	4876.2
					201	1913.8	4688.64	8766	15368.44
					205	2528.54	2548.53	3585.41	8662.48
					301	1457.22	1335.27	1089.74	3882.23
					405	1938.73	2174.06	2407.79	6520.58
					406	682.38	753.21	834.23	2269.82
					421	1140.17	1128.25	1249.59	3518.01
					422	2229.24	2308.84	2557.06	7095.14
					423	991.12	1049.28	1125.15	3165.55
					501	15426.24	9550.83	18865.67	43842.74
				PIX Total		40176.28	37998.62	53841.98	132016.88

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NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
514	MAINT MISC STM PL	514020	MAINT MISC PLT WAI	PRI	150	1153.96	515.04	1030.08	2699.08
					155	-26.53	33.04	-75.62	-69.11
					404	963.4	462.08	924.16	2349.64
					406	80.48	41.12	82.24	203.84
					421	141.2	61.6	123.2	326
					422	257.56	126.08	252.16	635.8
					423	93.62	46.14	80.36	220.12
					PRI Total	2663.69	1285.1	2416.58	6365.37
				PYE	150	1250.37	2612.09	1839.5	5701.96
					155	-151.78	-387.34	-255.37	-794.49
					405	229.95	526.82	371	1127.77
					406	84	182.47	128.5	394.97
					421	133.7	273.35	192.5	599.55
					422	279.65	559.48	394	1233.13
					423	92.19	187.33	133.38	412.9
					PYE Total	1918.08	3954.2	2803.51	8675.79
			514020 Total			64782.7	59223.33	92969.24	216975.27
		514030	MAINT MISC PLT KAHE	PIA	150	214.94	594.49	0	809.43
					155	-23.77	-129.95	0	-153.72
					405	49.28	111.3	0	160.58
					406	18	38.55	0	56.55
					421	28.65	57.75	0	86.4
					422	59.93	118.2	0	178.13
					423	16.04	39.1	0	55.14
					PIA Total	363.07	829.44	0	1192.51
				PIB	150	1939.63	1865.67	2303.28	6108.58
					155	-11.2	101.44	405.65	495.89
					405	374.52	408.1	478.59	1261.21
					406	136.8	141.37	165.77	443.94
					421	217.74	211.77	248.33	677.84
					422	455.46	433.4	508.26	1397.12
					423	161.82	165.59	228.15	555.56
					PIB Total	3274.77	3327.34	4338.03	10940.14
				PIL	150	18102.44	16106.29	20025.44	54234.17
					155	1445.08	984.38	1087.22	3516.68
					201	25497.36	-6565	13685.83	32618.19
					205	3113.84	2279.75	2045.03	7438.62
					301	36.3	2.43	4.45	43.18
					405	3307.03	3327.87	4140.36	10775.26
					406	1168.63	1152.67	1434.12	3755.42
					421	1942.78	1726.75	2148.36	5817.89
					422	3825.15	3534.18	4397.04	11756.37
					423	1633.2	1439.39	1778.01	4850.6
					501	688.54	21826.44	23793.6	46308.58
					PIL Total	60760.35	45815.15	74539.46	181114.96
				PIM	150	2709.1	5371.28	2795.31	10875.69
					155	-444.28	-1462.65	-317.28	-2224.21
					405	606.48	1253.98	827.33	2687.79
					406	207.11	434.38	286.6	928.09
					421	359.95	650.7	429.32	1439.97
					422	665.53	1331.72	878.62	2875.87
					423	188.53	329.03	208.63	726.19
					PIM Total	4292.42	7908.44	5108.53	17309.39
				PIP	150	14488.68	12432.42	10312.47	37233.57
					155	-903.62	-418.86	777.69	-544.79
					301	298.19	506.61	361.21	1166.01
					405	3099	2982.85	2470.88	8552.73
					406	1100.8	1033.24	855.86	2989.9
					421	1817.65	1547.8	1282.1	4647.55
					422	3613.02	3167.76	2624.04	9404.82
					423	1134.99	1011.59	933.84	3080.42
					501	84.38	76.54	85.05	245.97
					PIP Total	24733.09	22339.95	19703.14	66776.18

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						Data				
NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Jan 05	Feb 05	Mar 05	As of 3/31/05	
514	MAINT MISC STM PL	514030	MAINT MISC PLT KAHE	PIT	150	2344.48	1239.66	1858.12	5442.26	
					155	-150.7	-118.01	-200.39	-469.1	
					405	428.37	255.99	382.13	1066.49	
					406	147.12	88.67	132.36	368.15	
					421	253.82	132.83	198.28	584.93	
					422	474.23	271.86	405.82	1151.91	
					423	182.38	94.43	139.59	416.4	
				PIT Total		3679.7	1965.43	2915.91	8561.04	
				PIW	150	43.5	0	0	43.5	
					155	-0.3	0	0	-0.3	
					405	13.14	0	0	13.14	
					406	4.8	0	0	4.8	
					421	7.64	0	0	7.64	
					422	15.98	0	0	15.98	
					423	3.62	0	0	3.62	
				PIW Total		88.38	0	0	88.38	
				PIX	150	503.73	680.36	112.86	1296.95	
					155	19.4	-6.21	-0.86	12.33	
					405	91.99	140.98	22.26	255.23	
					406	33.6	48.84	7.71	90.15	
					421	53.48	73.16	11.55	138.19	
					422	111.87	149.72	23.64	285.23	
					423	43.89	56.76	9.43	110.08	
				PIX Total		857.96	1143.61	186.59	2188.16	
				PKM		901	337.35	337.35	337.35	1012.05
				PKM Total		337.35	337.35	337.35	1012.05	
				PPA		201	0	0	264.8	264.8
				PPA Total		0	0	264.8	264.8	
				PRC	150	125.32	250.64	0	375.96	
					155	3.29	-5.98	0	-2.69	
					404	110.92	231.04	0	341.96	
					406	9.6	20.56	0	30.16	
					421	15.28	30.8	0	46.08	
					422	31.96	63.04	0	95	
					423	10.8	20.61	0	31.41	
				PRC Total		307.17	610.71	0	917.88	
				PRI	150	193.14	0	0	193.14	
					155	-5.46	0	0	-5.46	
					404	166.38	0	0	166.38	
					406	14.4	0	0	14.4	
					421	22.92	0	0	22.92	
					422	47.94	0	0	47.94	
					423	15.74	0	0	15.74	
				PRI Total		455.06	0	0	455.06	
				PYE	150	2964.05	294.32	1177.28	4435.65	
					155	145.99	41.26	-163.44	23.81	
					405	558.45	59.36	237.44	855.25	
					406	204	20.56	82.24	306.8	
					421	324.7	30.8	123.2	478.7	
					422	679.15	63.04	252.16	994.35	
					423	260.93	28.27	85.36	374.56	
				PYE Total		5137.27	537.61	1794.24	7469.12	
514030 Total						104286.59	84815.03	109188.05	298289.67	
514 Total						199573.23	162842.29	229749.04	592164.56	
546	OPR SUPV/ENG OTH	546	Grand Total	PBE	150	0	0	221.62	221.62	
					155	0	0	32.5	32.5	
					404	0	0	202.16	202.16	
					406	0	0	17.99	17.99	
					421	0	0	26.95	26.95	
					422	0	0	55.16	55.16	
					423	0	0	21.4	21.4	
					PBE Total		0	0	577.78	577.78
				PBY		150	0	0	1902.88	1902.88

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						Jan 05	Feb 05	Mar 05	As of 3/31/05
546	OPR SUPV/ENG OTH	546	Grand Total	PBY	155	0	0	50.98	50.98
					404	0	0	1617.28	1617.28
					406	0	0	143.92	143.92
					421	0	0	215.6	215.6
					422	0	0	441.28	441.28
					423	0	0	164.46	164.46
				PBY Total		0	0	4536.4	4536.4
				PNG	150	0	0	8325.64	8325.64
					155	0	0	1924.95	1924.95
					406	0	0	623.23	623.23
					421	0	0	933.63	933.63
					422	0	0	1910.9	1910.9
					423	0	0	863.01	863.01
				PNG Total		0	0	14581.36	14581.36
		546 Total				0	0	19695.54	19695.54
546 Total						0	0	19695.54	19695.54
548	GEN EXP-OTH PROD	548	Grand Total	PIO	150	0	0	757.86	757.86
					155	-0.01	0	-57.45	-57.46
					405	0	0	170.66	170.66
					406	0	0	59.12	59.12
					421	0	0	88.56	88.56
					422	0	0	181.24	181.24
					423	0	0	59	59
				PIO Total		-0.01	0	1258.99	1258.98
				PIW	201	38.77	0	0	38.77
					501	0	0	2565.34	2565.34
				PIW Total		38.77	0	2565.34	2604.11
		548 Total				38.76	0	3824.33	3863.09
548 Total						38.76	0	3824.33	3863.09
549	MISC EXP-OTH PROD	549	Grand Total	PNG	150	1907.99	946.8	1038.81	3893.6
					155	101.27	-11.76	11.8	101.31
					406	103.2	46.28	53.97	203.45
					421	164.26	69.32	80.85	314.43
					422	343.58	141.84	165.48	650.9
					423	168.58	78.71	88.45	335.74
				PNG Total		2788.88	1271.19	1439.36	5499.43
				PYB	150	0	0	141.68	141.68
					155	0	2.89	58.2	61.09
					406	0	0	10.28	10.28
					421	0	0	15.4	15.4
					422	0	0	31.52	31.52
					423	0	0.24	16.83	17.07
				PYB Total		0	3.13	273.91	277.04
				PYT	150	138.36	0	0	138.36
					155	22.02	0	0	22.02
					404	110.92	0	0	110.92
					406	9.6	0	0	9.6
					421	15.28	0	0	15.28
					422	31.96	0	0	31.96
					423	13.46	0	0	13.46
				PYT Total		341.6	0	0	341.6
		549 Total				3130.48	1274.32	1713.27	6118.07
549 Total						3130.48	1274.32	1713.27	6118.07
551	IM SUPV/ENG-OTH PR	551	Grand Total	PBY	150	0	266.24	1863.68	2129.92
					155	0	10.3	72.09	82.39
					404	0	231.04	1617.28	1848.32
					406	0	20.56	143.92	164.48
					421	0	30.8	215.6	246.4
					422	0	63.04	441.28	504.32
					423	0	23.29	163.01	186.3
				PBY Total		0	645.27	4516.86	5162.13
				PJB	150	0	198	306	504
					155	0	-36.85	-22.44	-59.29

Hawaiian Electric Company, Inc.
Rate Case - Test Year 2005
Other Production O&M Actuals - 1st Quarter 2005

NARUC	NARUC Descr	GL INT	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
551	M SUPV/ENG-OTH PR	551	Grand Total	PJB	406	0	14.14	21.85	35.99
					421	0	21.18	32.73	53.91
					422	0	43.34	66.98	110.32
					423	0	13.57	23.87	37.44
				PJB Total		0	253.38	428.99	682.37
				PJW	150	0	0	64.78	64.78
					155	0	0	15.53	15.53
					406	0	0	5.14	5.14
					421	0	0	7.7	7.7
					422	0	0	15.76	15.76
					423	0	0	6.76	6.76
				PJW Total		0	0	115.67	115.67
				PNG	150	5915.04	5354.7	1651.89	12921.63
					155	827.41	839.13	380.23	2046.77
					301	19.33	29.15	0	48.48
					406	422.4	400.93	131.07	954.4
					421	672.32	600.61	196.35	1469.28
					422	1406.24	1229.28	401.88	3037.4
					423	565.79	521.46	171.06	1258.31
					501	0	561.9	150	711.9
				PNG Total		9828.53	9537.16	3082.48	22448.17
		551 Total				9828.53	10435.81	8144	28408.34
551 Total						9828.53	10435.81	8144	28408.34
552	M STRUC-OTH PRD	552	Grand Total	PIX	150	666.33	0	0	666.33
					155	-29	18.47	0	-10.53
					201	423.17	0	0	423.17
					405	124.83	0	0	124.83
					406	45.6	0	0	45.6
					421	72.58	0	0	72.58
					422	151.81	0	0	151.81
					423	53.47	1.56	0	55.03
				PIX Total		1508.79	20.03	0	1528.82
		552 Total				1508.79	20.03	0	1528.82
552 Total						1508.79	20.03	0	1528.82
553	M ELEC PLT-OTH PR	553	Grand Total	PIL	150	279.6	3529.95	4036.74	7846.29
					155	7.01	97.57	141.16	245.74
					405	52.56	749.42	857.01	1658.99
					406	19.2	259.57	296.85	575.62
					421	30.56	388.85	444.69	864.1
					422	63.92	795.88	910.14	1769.94
					423	24.04	305.42	351.8	681.26
				PIL Total		476.89	6126.66	7038.39	13641.94
				PIM	150	456.3	593.19	456.3	1505.79
					155	-140.4	-256.36	-74.82	-471.58
					405	65.7	96.46	74.2	236.36
					406	24	33.41	25.7	83.11
					421	38.2	50.05	38.5	126.75
					422	79.9	102.44	78.8	261.14
					423	26.53	28.33	32.13	86.99
				PIM Total		550.23	647.52	630.81	1828.56
				PIP	150	10331.38	9250.18	7896.1	27477.66
					155	-624.42	-930.92	-555.42	-2110.76
					405	2200.97	2213.02	1895.81	6309.8
					406	804	766.53	656.65	2227.18
					421	1279.7	1148.29	983.69	3411.68
					422	2676.67	2350.21	2013.34	7040.22
					423	814.43	700.45	618.01	2132.89
				PIP Total		17482.73	15497.76	13508.18	46488.67
				PIT	150	127465.72	78184.99	107192.57	312843.28
					155	13461.58	3837.51	5640.59	22939.68
					201	226840.29	117399.02	89218.63	433457.94
					205	10820.61	11691.7	3987.71	26500.02
					221	0	0	35468.94	35468.94

Hawaiian Electric Company, Inc.
Rate Case - Test Year 2005
Other Production O&M Actuals - 1st Quarter 2005

NARUC	NARUC Descr	GL INT N	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
553	M ELEC PLT-OTH PR	553	Grand Total	PIT	405	23664.58	16190.44	22169.11	62024.13
					406	8230.26	5607.88	7678.64	21516.78
					421	13969.53	8400.84	11502.96	33873.33
					422	26711.7	17194.16	23543.47	67449.33
					423	11752.61	6905.97	9500.26	28158.84
					501	217899.19	750334.12	528892.51	1497125.82
					900	-129589.05	-635617.93	-267571.48	-1032778.46
				PIT Total		551227.02	380128.7	577223.91	1508579.63
				PIW	150	4799.3	5610.74	6830.47	17240.51
					155	-69.15	-139.6	198.49	-10.26
					405	883.29	1151.96	1402.39	3437.64
					406	310.17	399.02	485.76	1194.95
					421	519.89	597.74	727.68	1845.31
					422	1011.89	1223.37	1489.32	3724.58
				PIW Total		7850.23	9303.93	11725.95	28880.11
				PIX	150	5909.38	10377.89	8919.9	25207.17
					155	-184.32	57.03	-79.12	-206.41
					201	5689.94	19820	300951.62	326461.56

Hawaiian Electric Company, Inc.
Rate Case - Test Year 2005
Other Production O&M Actuals - 1st Quarter 2005

						Data			
NARUC	NARUC Descr	GL INT N	Inter Code Descr	RA	EE	Jan 05	Feb 05	Mar 05	As of 3/31/05
554	M MISC PLT-OTH PR	554	Grand Total	PIT Total		76040.91	0	119652.65	195693.56
				PIX	155	-5.26	0	0	-5.26
					423	-0.44	0	0	-0.44
				PIX Total		-5.7	0	0	-5.7
				554 Total		76035.21	0	119652.65	195687.86
554 Total						76035.21	0	119652.65	195687.86
557	OTH PWR SUPPLY E	557	Grand Total	PCB	150	637.26	426.96	569.28	1633.5
					155	-140.15	-95.56	-127.42	-363.13
					406	64.8	46.26	61.68	172.74
					421	103.14	69.3	92.4	264.84
					422	215.74	141.84	189.12	546.7
				423	41.66	27.91	37.2	106.77	
				PCB Total		922.45	616.71	822.26	2361.42
				PCS	150	107.35	214.7	122.68	444.73
					155	-28.6	-57.2	-32.68	-118.48
					406	8.4	18	10.28	36.68
					421	13.37	26.96	15.4	55.73
					422	27.97	55.16	31.52	114.65
				423	6.61	13.24	7.56	27.41	
				PCS Total		135.1	270.86	154.76	560.72
				PIA	150	152.26	126.88	126.88	406.02
					155	-35.01	-24	-24	-83.01
					405	19.72	18.55	18.55	56.82
					406	7.2	6.43	6.43	20.06
					421	11.46	9.63	9.63	30.72
				422	23.98	19.7	19.7	63.38	
				423	9.84	8.66	8.66	27.16	
				PIA Total		189.45	165.85	165.85	521.15
				PIC	150	23416.96	20889.16	25153.38	69459.5
					155	2140.05	2231.21	2299.99	6671.25
					205	49.37	0	84.54	133.91
					405	4865.23	4789.64	5969.4	15624.27
					406	1777.2	1659.08	2067.77	5504.05
				421	2828.73	2485.32	3097.53	8411.58	
				422	5916.75	5086.54	6339.46	17342.75	
				423	2144.42	1946.79	2311.5	6402.71	
				501	87.36	427.25	673.17	1187.78	
				502	0	1459.98	3320.86	4780.84	
				PIC Total		43226.07	40974.97	51317.6	135518.64
				PKF	150	0	159.24	119.43	278.67
					155	0	21.18	-4.89	16.29
					406	0	10.28	7.71	17.99
					421	0	15.4	11.55	26.95
					422	0	31.52	23.64	55.16
				423	0	15.19	9.64	24.83	
				PKF Total		0	252.81	167.08	419.89
				PNC	150	977.51	773.72	865.36	2616.59
					155	122.4	78.36	145.94	346.7
					406	52.2	44.39	49.53	146.12
					421	83.09	66.47	74.17	223.73
					422	173.87	135.93	151.69	461.49
				423	92.21	71.75	85.19	249.15	
				502	0	0	-20000	-20000	
				PNC Total		1501.28	1170.62	-18628.12	-15956.22
				PNP	150	0	1104.13	414.06	1518.19
					155	0	-169.53	-63.58	-233.11
					406	0	92.53	34.71	127.24
					421	0	138.61	51.99	190.6
					422	0	283.68	106.38	390.06
				423	0	78.7	29.47	108.17	
				PNP Total		0	1528.12	573.03	2101.15
PSM	150	0	0	30.67	30.67				
	155	0	0	4.38	4.38				

Hawaiian Electric Company, Inc.
Rate Case - Test Year 2005
Other Production O&M Actuals - 1st Quarter 2005

NARUC	NARUC Descr	GL INT #	Inter Code Descr	RA	EE	Data			
						Jan 05	Feb 05	Mar 05	As of 3/31/05
557	OTH PWR SUPPLY E	557	Grand Total	PSM	406	0	0	2.57	2.57
					421	0	0	3.85	3.85
					422	0	0	7.88	7.88
					423	0	0	2.95	2.95
				PSM Total		0	0	52.3	52.3
				PYA	901	25187	25187	25187	75561
				PYA Total		25187	25187	25187	75561
				PYB	150	566.72	1416.8	743.82	2727.34
					155	101.44	264.06	42.41	407.91
					406	38.4	102.8	53.97	195.17
					421	61.12	154	80.85	295.97
					422	127.84	315.2	165.48	608.52
					423	56.06	141.52	66.19	263.77
				PYB Total		951.58	2394.38	1152.72	4498.68
				PYE	150	441.48	331.11	147.16	919.75
					155	-72.73	-12.31	3.04	-82
					405	78.84	66.78	29.68	175.3
					406	28.8	23.13	10.28	62.21
					421	45.84	34.65	15.4	95.89
					422	95.88	70.92	31.52	198.32
					423	30.92	26.85	12.66	70.43
				PYE Total		649.03	541.13	249.74	1439.9
				PYM	150	0	72.38	832.37	904.75
					155	0	3.97	45.64	49.61
					405	0	14.84	170.66	185.5
					406	0	5.14	59.11	64.25
					421	0	7.7	88.55	96.25
					422	0	45.72	45.82	91.54
					423	0	45.72	45.82	91.54

CA-IR-668

Ref: HECO Responses to CA-IR-2, Attachment 3B at page 6, RA=PIA Software and Consulting Services.

According to the workpaper, \$249,419 is included in test year expense for various new software maintenance and support agreements. Please respond to the following:

- a. Provide a breakdown of actual incurred costs to-date in 2005 by month for each line item within the "NOTES" descriptions.
- b. Explain changes that have occurred regarding software deployment and cost levels, reconciling such information into the response to part (a) in comparison to the test year comparisons.

HECO Response:

- a. Please refer to page 2 of this response where a summarized list of the Actual year-to-date

(YTD) cost and projected expenditures not yet incurred but expected to be incurred in the

Hawaiian Electric Company, Inc.

Rate Case - Test Year 2005

Software and Consulting Services - Actual Cost to Date

Description	Actual Cost YTD	Projected Remain 2005	Reference	Comments
Bailey DCS Software Maint	0	57,840	Refer to ABB Service Proposal on pgs 3-9	Budget amount of \$142,194 reduced to \$57,840 due to negotiated reduction.
Pipeline Software Maint	0	12,000	Refer to correspondence and maint. service scope on pgs 10-14	Budget amount of \$17,501 reduced to \$12,000 due to negotiated reduction
Work @ Home SW	0	2,400	None	Budget amount of \$4,375 reduced to \$2,400 due to limitations on the rollout to employees.
Plantview		6,300	Refer to EPRI Maint. Agreement on pgs 15-19	Budget amount of \$6,000 is increased to \$6,300
MCE Motor Tester	2,500	4,000	Refer to correspondence and invoice on pgs 20-22	Budget amount of \$6,500 is on target. Also, "MCI" in CA-IR-2, HECO T-6, Attch 3B, pg 6 of 21 should read "MCE".
OSI SW Maint	31,169	22,471	Refer to WO detail and invoice on pgs. 23-24.	Budget amount of \$46,268 is increased to \$53,640
Other Software				
SW Maint Sootblwrs and Demin PLCs	0	5,000	None	Technical staff reviewing possible needs.
Bentley Nevada Vib Sys	0	1,700	None	Recurring. To incur later in the year
Expert Tune SW	0	3,758	None	Technical staff reviewing
Microsoft Visio Prof Lic	2,871	0	Refer to pgs 25- 26.	
Total	36,540	115,469		
Total Recorded & Projected		152,009		Total Projected of \$152,009 is lower than budget of \$249,419

ABB

COPY

Proposal Date: December 2, 2004
Proposal Number: NJL-040121-1D
Prepared By: Nicholas J. Lehman
Service Account Manager: Ted
Collins

Hawaiian Electric Company, Inc.
Honolulu, HI 96840 USA



Automation Service





Table of Contents

Proposal Number: NJL-040121-1D

Date: December 2, 2004

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Commercial Summary	3
Scope of Supply	4
Equipment List	6
Signature Page	7



Commercial Summary

Proposal Number: NJL-040121-1D

Date: December 2, 2004

Three-year Service Contract Term with annual adjustments:

Shared Resident Engineering Contract (600 hours/year). For Year 1, the contract annual base rate is \$57,840 which equates to an hourly base rate of \$96.40 per hour. For each subsequent year of the contract, the contract base rate will be reviewed and adjusted based on federal Cost of Living Adjustment (COLA) indices for Oahu. The Cost of Living Adjustment to the contract base rate shall not exceed five percent (5%) increase per annum, nor shall it be less than 3.25% per annum.

Contract Period: Three-year term with the start date to begin on the first day of the month following mutual agreement after receipt and acceptance of Purchase Order (PO).

Shared Services Provision: This contract is assumed to be in conjunction with a similar agreement with Tesoro Hawaii Corporation. Pricing and terms are based upon both agreements being in effect. Should Tesoro not agree to a contract or drop their commitment, HECO will be notified of this change and the existing agreement will be renegotiated immediately and a new contract put in place within 60 days.

Payment Terms: ABB shall invoice each payment subject to net 30 days. Customer will have the option to select the desired billing method (monthly, quarterly or annually) upon issuance of the Purchase Order.

Cancellation Provision: The following provision would apply to this three-year commitment. This allows ABB to recuperate a pro rata portion of the relocation costs for an individual placed on the Island of Oahu for this contract. Therefore, HECO would be subject to the following cancellation charges if HECO terminates the contract prior to the end of the contract period:

Prorated amount of relocation costs are based on the elapsed time in months since the start date of Service Contract as a prorated fraction of thirty-six months. HECO is responsible for 1/3 of the relocation cost since 1/3 of the hours are committed to by HECO. For purposes of this cancellation provision HECO shall be responsible for 1/3 of actual relocation costs (or \$30,000) whichever is less.

Cancellation charges would not apply if HECO terminates the contract for cause, if the contract is terminated by mutual agreement of ABB and HECO, or if the contract is renewed or extended. HECO must provide ABB written notice of any performance issues, and a 90-day remedy period prior to termination for cause.



Scope of Supply

Proposal Number: NJL-040121-1D

Date: December 2, 2004

Field Service: Six hundred (600) man-hours per year of on-site services will be provided during the contract year. Time and expenses for travel to and from Customer's site will not be chargeable for local service person(s) permanently located on the island of Oahu. Four hundred and forty eight (448) hours are required to be scheduled during the upcoming year and must be coordinated with Tesoro Hawaii to ensure that a minimum of 40 hours per week are scheduled excluding training, vacation and holidays. An example of this schedule is attached in schedule B.

One hundred and fifty two (152) hours will remain in reserve. These hours will be used for emergency situation and special projects as directed by HECO. The appropriate overtime multipliers will be applied to these hours if warranted.

A trained control system personnel employed by ABB will perform preventative, repair, or emergency services to maintain the equipment in good working order. These services will include repair, cleaning, examining, aligning, adjusting, lubricating, calibrating, verifying control action of the equipment, and/or configuration assistance not deemed to be control design and custom system training on-site as requested by HECO.

After Hours Support: ABB will provide 35 weeks of a local service person to be available by pager. These weeks will be scheduled in advance with Tesoro Hawaii Corporation and Hawaiian Electric Corporation.

Quarterly Reporting: On a quarterly basis, ABB will provide a detailed report of field service hours, technical support hours, and parts replacement used.

Conditions of Service:

- ⇒ Primary Work Hour (PWH) is defined as an 9-hour period with one-hour lunch break beginning at a time to be designated by HECO for five days per week for a nominal 40-hour work week, excluding HECO recognized holidays. The PWP begins when the Resident Engineer arrives at the designated work place at the designated start time of the PWP.



Scope of Supply

Proposal Number: NJL-040121-1D

Date: December 2, 2004

- ⇒ Unused hours at the end of a contract year will be forfeited and can not be carried over to the next contract year unless mutually agreed to in advance.
- ⇒ If additional service time is required beyond what the resident engineer can provide, then additional hours may be purchased per HECO's alliance agreement which is .80 X published rate. 2004 published rate is \$175 per hour. Therefore HECO's rate would be \$140 per hour.
- ⇒ All travel and living expenses for services rendered to HECO or its subsidiaries outside the island of Oahu will be invoiced separately at actual cost.
- ⇒ Travel time to the designated work place prior to the start of the PWP and travel time from the designated work place at the end of the PWP is not considered part of the deliverable time. Travel time during the designated PWP is considered of the deliverable time.
- ⇒ The ABB Field Service Engineer has unlimited access to technical support via the ABB 24X365 SupportLine.
- ⇒ Services provided outside PWP will be deducted from the bank of hours and will be accounted for as follows:

Work Period	Multiplier on Base Rate
Over 8 Hours on Normal Workday, Mon. – Fri.	1.5
Saturday	1.5
Sunday	2.0
ABB or National Holidays	3.0

In cases where the ABB service manager deems necessary, ABB agrees to bring the appropriate resource (specialist) to site in support of the field service engineer. In these cases payment for the specialist's time will be mutually decided upon at the time of the occurrence. However, in all cases where the ABB specialist is brought on site and it is found that the problem was a result of damage through neglect, process upset, or any reason other than ABB equipment non-performance, the specialist's time will be invoiced at ABB's standard rates.



Equipment List

Proposal Number: NJL-040121-1D

Date: December 2, 2004

The following Equipment is covered by this Agreement:

HECO's Kahe, Waiau and Honolulu Generating Stations located on Oahu

- ABB / Bailey INFI-90 Open Distributed Control Systems (DCS)



Signature Page

Proposal Number: NJL-040121-1D

Date: December 2, 2004

As hereinafter used, the term "AGREEMENT" shall mean the completed and final SERVICE AGREEMENT and understanding between Hawaiian Electric Company, Inc. (HECO) and ABB Inc. (ABB). The AGREEMENT is documented in its entirety in proposal number NJL-040121-1D. ABB Inc. offers Proposal number NJL-040121-1D expressly conditioned upon the Consultant Services Master Agreement YA-98-18 between ABB Automation (now ABB Inc.) and Hawaiian Electric Company, Inc., and any amendments, attachments, or schedules thereto. Any different or additional terms and conditions evidenced in your Purchase Order shall be considered an offer subject to written confirmation of ABB's acceptance. ABB's failure to object to any term contained in any such communication from HECO shall not be deemed an assent to such term or a waiver of this AGREEMENT.

This AGREEMENT may be extended provided both parties agree upon pricing, scope, and terms. This proposal is valid for 60 days.

AGREEMENT NUMBER: NJL-040121-1D

2006
Year 1: \$ 57,840.00 \$96.40/hr.
Year 2: \$ 60,180.00 \$100.30/hr. (est. - see commercial summary)
Year 3: \$ 62,615.00 \$104.36/hr. (est. - see commercial summary)

ABB Inc.

Ted Collins
Signature

Ted Collins
Print Name

Service Account Manager
Title

Feb 18 / 2005
Date

HECO - Honolulu, HI 96840 USA

Thomas C. Simmons
Signature

Thomas C. Simmons
Print Name

VP, Power Supply
Title

12/8/04
Date

Please reference this Proposal and direct your Purchase Order to:
ABB Inc., Attn: Ted Collins, Service Account Manager
4800 SW Macadam Avenue, Suite 240
Portland, OR 97239 USA
Phone: 503 248-1180 ext. 106 Fax: 503 248-1194

Shiroma, Floyd

From: Fong, Kenneth
Sent: Monday, June 06, 2005 3:12 PM
To: Shiroma, Floyd
Subject: FW: dtnDiamond Control - Terminal Automation Sys.

I'm send you this again in case you misplaced it. It has the maintenance options in the note below.

From: Fong, Kenneth
Sent: Friday, October 22, 2004 11:32 AM
To: Yuen, Nathan; Shiroma, Floyd
Subject: FW: dtnDiamond Control - Terminal Automation Sys.

Nathan,
Since Fuels is the customer and will pay for the maintence, can you review the maintenance options and get the license agreement signed. Decide what maintenance option do you want and then we will have to make arrangements to execute an agreement. Standard procedure. I think Jeff can sign it.

From: Hirashima, Lori
Sent: Friday, October 22, 2004 11:14 AM
To: Rapozo, Chris; Fong, Kenneth
Cc: Rooney Engineering - Andy Siegfried; Rooney Engineering - Bill Decker; Rooney Engineering - Travis Mecham
Subject: dtnDiamond Control - Terminal Automation Sys.

Ken, pls see the attached maintenance options. Review/sign and return (to me) the two license agreements.

Chris, pls load the New Supplier Pkt and advise on the new supplier #. James Dean said he faxed it on 10/18.

I would like to issue the PO no later than Monday, Oct. 25th, as James will be on personal vacation (in Hawaii) from next Friday.

Thank you.

From: Hirashima, Lori
Sent: Friday, October 22, 2004 11:07 AM
To: 'James Dean'
Cc: Travis Diamond; Taci Kistler
Subject: RE: Hawaiian Electric Company, Inc. Waiau Fuel Pipeline Project

Thank you, James. We'll review these documents and I'll be in touch w/ you shortly.

From: James Dean [mailto:James.Dean@dtm.com]
Sent: Friday, October 22, 2004 11:04 AM
To: Hirashima, Lori
Cc: Travis Diamond; Taci Kistler
Subject: RE: Hawaiian Electric Company, Inc. Waiau Fuel Pipeline Project

Lori:

The New Supplier Packet was faxed to Chris Rapozo on 10-18-04.

Thanks for the way you changed the wording in the order.

6/6/2005

Page 2 of 4

The information on our various maintenance options is attached. The cost is: Software only \$ 450 per month; Hardware/Software \$700 per month; 1st Class \$1000 per month; and Diamond Class \$1500 per month. This is something you can decide on at a later date. While we strongly recommend you subscribe to one of the options, it is not required.

The license agreement for each terminal is attached. You will need to sign each one and return them to me before we begin installation. We will begin getting the equipment ready and ship it as soon as we receive the PO from you. Email it to me at james.dean@dtm.com or fax it to me at 253-323-5088.

We will be prepared to start the installation on Monday, December 6, 2004.

Thank you very much for your business. You will be very happy you chose dtmDiamond Control for your terminal automation. We will see to it.

James

-----Original Message-----

From: Hirashima, Lori [<mailto:lori.hirashima@heco.com>]
Sent: Thursday, October 21, 2004 8:55 PM
To: James Dean
Cc: Fong, Kenneth
Subject: RE: Hawaiian Electric Company, Inc. Waiiau Fuel Pipeline Project

Hi James,

I'm glad we had the opportunity to talk.

I confirmed the following w/ the Project Manager, Ken Fong:

- The System Staging & Testing will be a part of this order. Pls see below for the addition/revision.
- We will look at your Maintenance proposal once again. Pls forward those documents to me.
- We will review and sign the license agreements. Pls forward those documents to me.
- The physical addresses for the start-up are:

Hawaiian Electric Company, Inc
Iwilei Tank Farm
855 N. Nimitz Hwy.
Honolulu, HI 96817

Hawaiian Electric Company, Inc.
Barber's Point Tank Farm
91-196 Hanua St.
Kapolei, HI 96707

Pls advise on the completion of our New Supplier Packet. I am not able to issue the PO if the Packet is not completed/returned.

Thank you.

From: James Dean [<mailto:James.Dean@dtm.com>]
Sent: Thursday, October 21, 2004 2:32 PM
To: Hirashima, Lori
Subject: RE: Hawaiian Electric Company, Inc. Waiiau Fuel Pipeline Project

Lori:

I just left a message on your vm. Give me a call please.

Thanks,

James

850-871-6678

-----Original Message-----

6/6/2005



dtmDiamondControl
Terminal Management Solutions. RealTime.

DIAMOND CLASS MAINTENANCE**

\$1500 / annual / mo
per site

The first of its kind...providing an unmatched level of coverage...
including weather and vandalism protection

Project start contract
9/05

\$1,500 * 4 mo. * 2 sites =
\$12,000

- Repair or replacement of any failed system component purchased from/provided by dtmDiamond, including acts of God, abuse and vandalism. Labor, parts and equipment modification charges are included
- Access to a dedicated support "hot line" providing direct access to a dtmDiamond technician 24x7x365
- Annual terminal site visit by a dtmDiamond technician to review system and hardware performance at no additional cost
- Lightning protection provided as deemed necessary by dtmDiamond
- Twelve (12) hours of free software customization per year per site license
- Commit to a three year agreement and receive a new computer and replacement printers at the time of contract execution and at each renewal period
- 24x7x365 software service support
- A dedicated backup computer at dtmDiamond's office provided at no additional expense to the customer
- An Emergency Repair Box (ERB), containing supplies tailored to your terminal, will be provided to insure minimal downtime in the event of system failures
- Off site backup of all terminal data, kept on the backup computer at dtmDiamond's office. Data fed via the Internet
- Internet connectivity at the terminal provided at dtmDiamond's discretion if it is not already available.
- Regular software and database maintenance routines performed on the terminal database by dtmDiamond technicians to insure optimum system performance. This includes:
 - Hard drive de-fragmentation
 - Database tuning and sizing
 - Operating system updates
 - Automation system updates
- Free automation system software updates
- Reduced programming rates
- Weekly phone calls from a Diamond technician to insure maximum level of customer service
- Unlimited calls during office hours
- No additional charge for critical support calls after hours
- Covers an unlimited number of HC12 card readers

**Broadband Internet access required. Diamond Class Maintenance option does not cover theft. PASS Controller card readers (Model HC12) required. Guardian3 automation system preferred. Contact a sales representative for package pricing. Prior to receipt of an executed contract, terms and conditions are subject to change without notice. Final terms and conditions are defined in the DTN Maintenance Agreement provided upon request.

Maintenance Options

Software Maintenance Option

- 24x7x365 software service support
- Free automation system software updates
- Unlimited calls during office hours
- No additional charge for critical support calls after hours
- Reduced programming rates
- Option to lock in the monthly maintenance fee for up to 3 years

Hardware/Software Maintenance Option

- All of the benefits of the Software Maintenance Option above, plus:
- Repair or replacement of any failed system component provided by dtnDiamond
- Labor, parts and equipment modification charges are covered
- This option covers a maximum of eight (8) card readers per site license. Additional units can be covered by an extended warranty (see details below)

Card Reader Extended Warranty

card readers may be purchased for \$50 per month per unit.

First Class Maintenance Option



FIRST CLASS MAINTENANCE *

Giving you the freedom to *manage* your terminal
rather than *maintain* it!

Superior Service – Reliable Equipment – Peace of Mind

- 24x7x365 software service support
- Free automation system software updates
- Unlimited calls during office hours
- No additional charge for critical support calls after hours
- Reduced programming rates
- Repair or replacement of any failed system component provided by dtnDiamond
- Labor, parts and equipment modification charges are covered
- Internet connectivity at the terminal provided at dtnDiamond's discretion if it is not already available.
- An Emergency Repair Box (ERB), containing supplies tailored to your terminal, will be provided to insure minimal downtime in the event of system failures
- A dedicated backup computer at dtnDiamond's office provided at no additional expense to the customer
- Off site backup of all terminal data, kept on the backup computer at dtnDiamond's office. Data fed via the Internet
- Regular software and database maintenance routines performed on the terminal database by Diamond technicians to insure optimum system performance. This includes:
 - Hard drive de-fragmentation
 - Database tuning and sizing
 - Operating system updates
 - Automation system updates
- Four (4) hours of free software customization per year per site license
- Covers an unlimited number of HC12 card readers
- Weekly phone calls from a dtnDiamond technician to insure a maximum level of customer service
- Commit to a three year agreement and receive a new computer and replacement printers at the time of contract execution and at each renewal period

*Broadband Internet access required. Maintenance services do not cover parts of Customer's equipment.

EGG. 89332, line 1

PO. P71123

AMENDMENT NO. 1
to
Annual Software Maintenance Agreement
between
HAWAIIAN ELECTRIC COMPANY
and
EPRISOLUTIONS, INC.
"PlantView Software"
BSA 220305-03-11156

The parties hereby mutually agree to amend the Agreement as follows:

1. The fees for this Amendment Number 1 are \$7,875. This includes the fee for 2003, which ends March 2004 (\$4,500) and a nine month *pro rata* portion (\$3,375) to bring the end period to December 31, 2004. The Anniversary Date is changed to December 31, 2004.

All other terms and conditions of the Agreement remain unchanged and in full force and effect.

HAWAIIAN ELECTRIC CO.

By: John Itai 12/13/04

Print Name: John Itai

Title: Predictive Maintenance Supervisor

Date: December 13, 2004

EPRISOLUTIONS, INC.

By: Josephine M. Erickson

Print Name: Josephine M. Erickson

Title: Contracts Specialist

Date: ~~December 16, 2003~~

December 22, 2004

cca. 89332, line 2

EPRI Solutions, Inc. (ESI)
Annual Software Maintenance Agreement -2005
with
Hawaiian Electric Company
BSA 220305-03-11156
"PlantView Software"

- I. **PlantView Software.** PlantView is a web-based software platform for work process productivity applications. PlantView provides the enterprise access to information and automates work process applications across the intranet using browser technologies. The application modules of PlantView automate the entry, storage, management and reporting of information as an integrated knowledge management system.

PlantView productivity applications presently released include:

- PlantView Predictive Maintenance
- PlantView Events Report
- PlantView Capability Report
- PlantView Data Visualizer
- PlantView Maintenance Basis Optimization
- PlantView Automated Training Manager
- PlantView Report Library
- PlantView Electronic Rounds
- PlantView Electronic Logbook
- PlantView Corrective Action Program

The suite of PlantView applications is expanding.

BSA 220305-03-11156

"My Training Courses" for web delivered tutorials in PlantView applications. Users will also be given access to download PlantView documentation from the website.

Upgrades to existing PlantView applications are being released periodically to correct bugs, modernize the basic operating system to the latest software releases, or to provide newly developed features and functional enhancements. The Annual Maintenance Agreement will include access to these PlantView upgrades for the applications the User has licensed. PlantView upgrades will be delivered via web download.

PlantView User Group Meetings are held periodically and organized as directed by the Users to work within their constrained travel budgets. The Annual Maintenance agreement will provide for access to the User Group Meetings free of any registration charges. The user Group Meetings provide a forum for technical

BSA 220305-03-11156

PlantView User can contact their EPRI Client Sales Representative to purchase a license in these new

PlantView upgrades will be distributed through web download. Download procedures will be scripted and provided to guide the download and install. Telephone support will be available during normal business hours to answer questions or help aid in troubleshooting problems experienced in the download.

On-site support is available for purchase on a time and material basis at any time to execute the PlantView upgrade.

Task 4 PlantView User Group

PlantView User Group Meetings will be organized and held periodically. The user group meetings provide a forum for technology transfer, sharing experiences among users, demonstration of newly released applications, and to collect User's recommendations for enhancements.

The Annual Maintenance Agreement will provide for access to the user group meetings free of any registration charges. The PlantView users are constrained in their travel to attend user group meetings due to budget limits and heavy seasonal workload. PlantView users will provide direction and advise on the frequency, calendar period, and location for the user group meetings to help relieve the travel constraints and enable attendance.

A key function of the PlantView User Group is to provide guidance on the continuous improvement of the product. The User Group will provide steering and prioritization for recommended PlantView application enhancements. A list of recommended enhancements will be collected and managed to provide guidance to the PlantView development team. These recommendations may be collected from the user group meeting, through discussions with users, and from e-mail submittal. Periodically, this list will be provided to the PlantView users, with a request to prioritize the recommendations with regard to providing value to the user. The prioritized list of enhancement recommendations will be provided to the development team.

BSA 220305-03-11156

maintenance fee will be a percentage of the PlantView applications license fees quoted on delivery of the PlantView applications engaged by the Licensee.

The PlantView license fees provide the product maintenance services for one year from the installation anniversary date. The PlantView Licensee is encouraged to execute the annual maintenance agreement on their anniversary date to ensure continued access to the PlantView maintenance services.

A number of PlantView users participated in the collaborative development of specific applications by providing supplemental funding to pay for the development. In consideration of funding the application development, a Use License in the application was extended free of any license fees. In further consideration, the annual maintenance fees will be calculated to exclude the license fee component for the applications that were collaboratively developed.

The PlantView license is for three power plants and the applications engaged include:

- PlantView Predictive Maintenance
- PlantView Maintenance Basis Optimization
- PlantView Event Report
- PlantView Report Library

The Annual Maintenance Fee is \$6,300

The Period of Performance: January 1, 2005 through December 31, 2005

V Invoicing and Payments

- 1 EPRI Solutions should direct invoices to:



Hawaiian Electric Company
PO Box 2750
Honolulu, Hawaii 96840-0001
Attn: Accounts Payable

- 2 CUSTOMER shall pay ESI's invoice within thirty days after the invoice date in U.S. dollars by check or wire transfer (ABA Routing #121000358, Acct. 14930-04704, Bank of America, San Francisco, CA.).

If mailed, payments should be sent to:

EPRI SOLUTIONS, INC.
File # 30197
P. O. Box 60000
San Francisco, CA 94160

Intending to be legally bound, the parties' duly authorized representatives have executed this Agreement below:

<p>EPRI Solutions, Inc. Post Office Box 10414 3412 Hillview Avenue Palo Alto, CA 94304 Tel: 650-855-8583 Fax: 650-855-8588</p> <p> 12-22-04 Authorized Signature / Effective Date</p> <p>Josephine M. Erickson/Contracts Specialist Printed Name of Authorized Signatory/Title</p>	<p>Hawaiian Electric Company PO Box 2750 Honolulu, Hawaii 96840-0001 Mail Stop: WP3-IP Tel: (808) 543-4231 / Fax: (808) 543-4366 e-mail: john.itali@heco.com</p> <p> 12/13/04 Authorized Signature / Effective Date</p> <p>John Itai/ PDM Supervisor Printed Name of Authorized Signatory/Title</p>
---	---

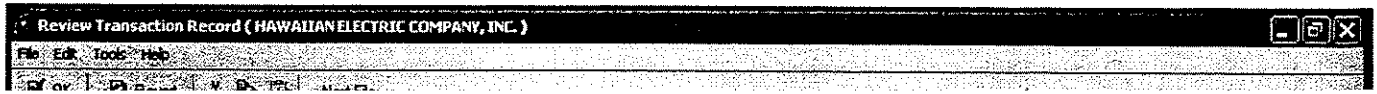
Yim, Karen

From: Erolin, Saturnino
Sent: Tuesday, June 07, 2005 2:12 PM
To: Yim, Karen
Cc: Chelfy, Mike
Subject: MCE Motor Tester Maintenance

The following are the POs to renew the extended warranty for our two motor testers for 2005:

Motor Tester	PO	Cost
MCE #684	P74066	\$2500
MCEmax #560	P77234	\$4000

Saturnino D. Erolin (WP3-IP)
PdM Specialist
(808) 543-4281 - phone
(808) 221-9459 - cel
(808) 361-9615 - pager
<<mailto:saturnino.erolin@heco.com>>



Review Transaction Record (HAWAIIAN ELECTRIC COMPANY, INC.)

File Edit Tools Help

OK Revert Next File

Tran Id: 20050331686132800012909

Category: Invoicing Transactions Record

Status: 0 Posted

General Category Details

Created: 3/31/2005 19:03:33 By: AD00

Type: SRV Invoice - Service Order Item

Transaction Date: 3/31/2005

Period: 03/05

Amount: 2,500.00

Account: PIM258WSTNENPZZZZZ501

Description: Maintenance Admin Maint Boiler P&I Eq-Fred Waiou Steam D&M NonSuperv.

Current File: MSF900

MSM903A ~

Date Printed 7 June 2005 14:35:24
Userid KYIM
Program Name msq000.exe
Program Description Review Transaction Record (HAWAIIAN ELECTRIC COMPANY, INC.)
Version 001A
Revision 144.1 \$ Date: Tuesday, February 10, 2004
Module 3001
Product Version 5.2.3.2
File Version 5.23.144.1
Location J:\bin\
Compiled Date 25 February 2004 09:20
Form Name ImMSQMUI00Man

1652 Work Order Detail / Summarized Labor Report

Report Parameters

District: P Parent WO: * WO Number: PR040434 From Date: 200501 To Date: 200505 Show Emp Info: No

Company: HECO

Parent WO:

Work Order: PR040434 OSIOSFTSoftware Costs PI, Processbook

Manual Journal Vouchers

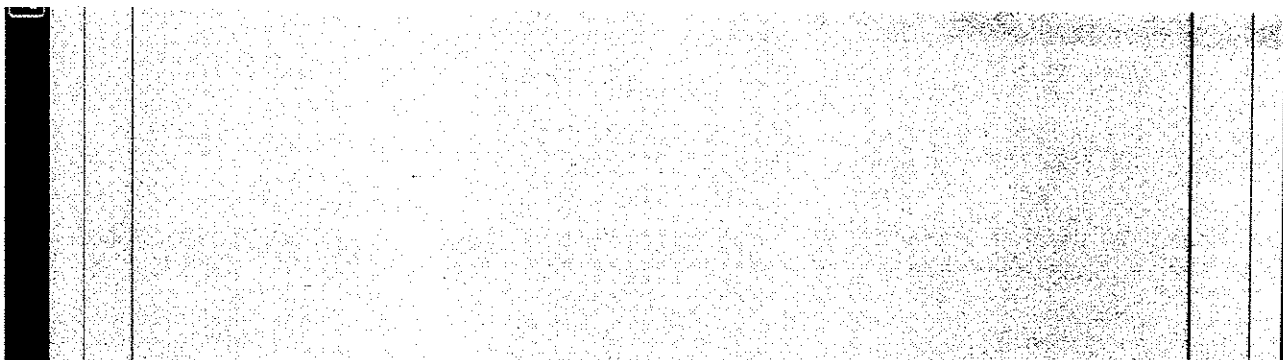
Tran Dte	Acct Code	Voucher No	Description	Accountant Code	Qty Amt	Tran Amt
Expense Element: 462 IS Exp-PC Sftw Purch						
05/16/2005	PIB245WSTNENPIZZZZ462		ON COST CHG TO: 095653/001	HWB900	0	572.00
05/19/2005	PIB245WSTNENPIZZZZ462		ON COST CHG TO: 095653/001	HWB900	0	2516.80
			Expense Element: 462	Subtotal:		3088.80
			Total:			3088.80

Purchase Requisition Order Receipts

Tran Dte	Acct Code	PO No	PO Item No	Supplier No	Unit of Purch	Qty	Net Price	Tran Amt
Expense Element: 462 IS Exp-PC Sftw Purch								
05/16/2005	PIB245WSTNENPIZZZZ462	P76427	001	015682	EA	5	1000.00	5200.00
05/19/2005	PIB245WSTNENPIZZZZ462	P76427	001	015682	EA	22	1000.00	22880.00
				Expense Element: 462	Subtotal:			28080.00
				Total:				28080.00

Vendor - OSI Software, Inc

Work Order Total: 31168.80



Accounting Transaction Details Review Review Transactions (HAWAIIAN ELECTRIC COMPANY, INC.)

File Items Edit Tools Help



Accounting Transaction Details Review Review Transactions (HAWAIIAN ELECTRIC COMPANY, INC.)

File Items Edit Tools Help

OK Revert Filter

Account Code: PIP240031NENP0000000000 PS Ping PS Pol/Pro Kahe O&M Produc

Acct Period: 05/05

Transaction	Amount	Act
1) Type TranNo & Typ Man Vchr Description		
2) MPJ 44214560000 H FA650505 MICROSOFT VISIO PROFESSION	318.98	
3) MPJ 44215130000 H FA650505 MICROSOFT VISIO PROFESSION	318.98	
4) MPJ 44215270000 H FA650505 MICROSOFT VISIO PROFESSION	318.98	
5) Total for Acct Period	956.94	
6) Total Other for Acct Period	956.94	
7) Total for Account Code	956.94	
8) Total Other for Account Code	956.94	
9)		
10)		
11)		
12)		
13)		
14)		
15)		

See pg 25

MSG002A ~

Date Printed 7 June 2005 16:11:21
Userid KYIM
Program Name msq000.exe
Program Description Accounting Transaction Details Review Review Transactions (HAWAIIAN ELECTRIC COMPANY, INC.)
Version 001A
Revision 144.1 \$ Date: Tuesday, February 10, 2004
Module 3001
Product Version 5.2.3.2
File Version 5.23.144.1
Location J:\bin\
Compiled Date 25 February 2004 09:20
Form Name frmMSGMU00Main

CA-IR-669

Ref: CA-IR-142 response from HECO

HECO WP-408 shows historical system net heat rate from 1999 through 2003 at approximately 10,400 btu/kWh. The response to CA-IR-142 shows the system net heat rate for 2004 is 10,621 btu/kWh. Please explain why the system net heat rate increased to 10,621 btu/kWh.

HECO Response:

The actual HECO system net heat rate from 1999 to 2003 averaged 10,454 Btu/kWh. The HECO system net heat rate for 2004 was higher than the 1999 to 2003 historical average for the same reasons discussed in HECO T-4, page 32, lines 4 to 14.

Total system demand and HECO's net system generation have been increasing.¹ In addition, in 2004, HECO's generating units experienced higher Equivalent Forced Outage Rates ("EFORs") than in previous years. (Please see HECO's response to CA-IR-461 for recorded EFOR information.) These factors (higher demand and higher EFORs) have resulted in a greater proportion of the total energy to be produced by HECO's less efficient cycling and combustion turbine units. This resulted in the higher net system heat rate in 2004 compared to previous years.

¹ The net system peaks in 2001, 2002, 2003 and 2004 were 1,191 MW, 1,204 MW, 1,242 MW and 1,281 MW, respectively. Refer to HECO-WP-408 for 1999-2003 HECO net generation.

CA-IR-670

Ref: T-4.

- a. Please provide the energy generated by Generating Unit by month for 2004.
- b. Please provide the HECO system energy requirement and peak demand by month for 2004.

HECO Response:

- a. Please see page 2 to this response.

b.

<u>Month</u>	<u>System Net MWh</u>	<u>Net MW</u>
Jan	641,799	1,150
Feb	618,597	1,175
Mar	641,002	1,122
Apr	636,687	1,130
May	683,004	1,186
Jun	675,268	1,158
Jul	719,620	1,220
Aug	737,465	1,247
Sep	714,359	1,255
Oct	718,837	1,281
Nov	668,698	1,227
Dec	671,662	1,181

1.55618590769

K6
419.0
303.0
463.0
017.0
867.0
947.0
357.0
248.0
812.0
077.0
622.0
222.0
354.0

CA-IR-671

Ref: Exhibit 504, Page 1 and CA-IR-147 response from HECO

Exhibit 504, page 1 shows the amount of purchased energy from Tesoro decreased from 5,449,573 kWh (2003) to 3,677,119 kWh (2004). Please explain why energy from this resource decreased.

HECO Response:

The Tesoro cogeneration facility was installed primarily to provide electric energy to the Tesoro refinery. The excess energy after the refinery's internal energy consumption is made available for sale to HECO. The decrease in energy sold to HECO in 2004 from 2003 could be a result of the cogeneration facility's lower availability, or Tesoro's increased internal energy consumption, or some combination thereof, in 2004 as compared to 2003. Since Tesoro is an as-available energy source, HECO does not track the facility's availability, nor does HECO have information on the refinery's internal energy consumption.

CA-IR-672

Ref: CA-IR-131 and CA-IR-128 responses from HECO.

HECO updated the Power Supply Operation and Maintenance 2005 Schedule and the A, B and C heat rate constants. Please provide hourly data in electronic spreadsheet and hard copy formats of the updates and revisions made to the production simulation model.

HECO Response:

The requested information is not yet available as the production simulation using updated assumptions (in accordance with HECO's submission to the Consumer Advocate and the Department of Defense on May 5, 2005) has not yet been performed. The updated results with accompanying exhibits and workpapers will be submitted with HECO's rebuttal testimony to be filed August 2005.

CA-IR-673

Ref: WP-406.

- a. How is Equivalent Forced Outage Rate of the Generating Units modeled in the P-Month Production Simulation Model?
- b. Energy purchased from the supplier H-Power, is shown in WP-406, Equivalent Forced Outage Rate with an Availability of 90%. This table indicates Equivalent Forced Outage Rates for HECO generating units. However, H-Power does not have an Equivalent Forced Outage Rate. Was the H Power Equivalent Forced Outage Rate modeled differently than for the other generating units? If so, how?

HECO Response:

- a. The Equivalent Forced Outage Rates (EFORs) are modeled on a probabilistic modeling basis. The EFORs are entered into the HE05TY2X.upf (Thermal Performance File). The HE05TY2X.upf file was provided to the Consumer Advocate and the Department of Defense on April 19, 2005 with HECO's response to CA-IR-501.
- b. H-Power is modeled using an Availability Factor (AF) of 90%. AF is defined by the North American Electric Reliability Council (NERC) as follows:

CA-IR-674

Ref: HECO responses to CA-IR-251, CA-IR-254, CA-IR-425 and HECO-1310 (HEI Billings).

In the confidential portion of the response to CA-IR-251, the Company provided total 2003 HEI expenses (excluding intercompany billings) by activity, showing only the HEI costs that directly charged or partially allocated to HECO. CA-IR-254 sought, in part, the identification of the types of costs retained by HEI and not billed to HECO, HELCO or MECO. CA-IR-425 referred to the response to CA-IR-254 and requested, in part, a detailed breakdown of the HEI expenses retained by HEI for calendar years 2003, 2004 and 2005. Although the response to CA-IR-425 indicated that the HEI forecast is not prepared at an activity level, the Company did not provide actual HEI retained costs in 2003 or 2004 by activity. Confidential page 3 of the response to CA-IR-251 represents a recap of the detailed HEI billing to HECO in 2003 by activity group, identifying four activity groups (ACQ, COM, LEG and STR) with either "zero" activity or otherwise retained by HEI (i.e., not billed to HECO). Please provide the following:

- a. Does HEI incur costs that are charged to the above activities (ACQ, COM, LEG and STR) and retained by HEI (i.e., not billed to HECO, HELCO and MECO)? If not, please explain.
- b. Does HEI incur other costs that are not charged to the above activities that are also retained by HEI? Please explain.
- c. Referring to item (a) above, please provide detailed information for calendar year 2003 comparable to confidential pages 4 through 159 of CA-IR-251 for the above activities (ACQ, COM, LEG and STR) whose costs were retained by HEI. If the requested information is not available, please explain.
- d. Referring to item (b) above, please provide detailed information for calendar year 2003 comparable to confidential pages 4 through 159 of CA-IR-251 for the identified activities or categories of expense whose costs are retained by HEI. If the requested information is not available, please explain.

HECO Response:

HEI's intercompany billing system that is used to generate the detailed bill provided in response to CA-IR-251 pages 4-159, is currently setup to capture only chargeable time (labor costs) and expenses (nonlabor costs) to the subsidiaries and any non chargeable activities that HEI management has specifically requested to be tracked. All other time that is deemed not

chargeable to the subsidiaries is included in one overall intercompany billing activity code called "NONBIL".

Expenses (nonlabor costs) deemed not chargeable to the subsidiaries are not input into HEI's intercompany billing system. (Note: HEI's intercompany billing system is separate from HEI's general ledger system.) Invoice data are manually input into HEI's intercompany billing system only if a designated chargeable activity code is indicated on the invoice. No data from invoices that are designated with a "NONBIL" activity code on the face of the invoice are input into the intercompany billing system.

Hence, although HEI may spend time on the intercompany billing activity codes ACQ (Acquisitions/Divestitures), COM (Community Relations), LEG (Legal) and STR (Strategic Planning), if these activities are not for the direct benefit of a specific subsidiary or subsidiaries, HEI does not track the costs similar to the detailed bill provided in response to CA-IR-251 pages 4-159 since all labor hours not charged to a subsidiary are included in the activity code "NONBIL" and the nonlabor costs not charged to a subsidiary are not being captured at all in the intercompany billing system.

In general, expenses (labor and nonlabor) incurred by HEI that are not billed to HECO as shown in HECO-1310 are incentive compensation, charitable contributions, HEI board of directors expenses, advertising, community support and government relations activities, strategic planning including acquisitions, financing activities of the holding company and all related support functions of the holding company (i.e. cash management, forecasting, benefits administration).

CA-IR-675

Ref: HECO responses to CA-IR-254 and CA-IR-513 (Government and Community Relations).

In response to CA-IR-254, the Company indicated that HEI retains, or does not bill, costs associated with various activities, including government relations and community relations functions. In response to CA-IR-513, HECO provided copies of the written job descriptions for certain public affairs and government relations positions, which include legislative responsibilities. Please provide the following:

- a. Please explain the rationale for HEI's retention of the costs associated with the government, legislative and community relations functions.
- b. Please provide written position descriptions for each HEI employee involved in government, legislative and community relations functions, regardless whether the related costs are retained by HEI.
- c. Referring to the HEI job descriptions provided in response to item (b) above, do any of the HEI employees engage in lobbying activities? Please explain.
- d. Referring to the HECO job descriptions provided in response to CA-IR-513, do any of the HECO employees engage in lobbying activities? Please explain.
- e. Why has HECO not proposed to eliminate any portion of the test year costs associated with governmental relations and public affairs (see CA-IR-513) that are largely or partially associated with legislative activities? Please explain.

HECO Response:

- a. Although HECO and HEI collaborate on some government relations and community relations matters, HEI does not charge HECO for its activities. Additionally, because HECO has its own government, legislative and community relations functions, HEI made a policy decision not to charge for these functions although it could be argued that these functions performed by HEI may also provide benefit to HECO. Consequently, HEI does not track its government, legislative and community relations functions.

- b. & c. Position descriptions for each HEI employee involved in government, legislative and community relations functions are not relevant for purposes of this rate case since HEI has not included any of these amounts in its test year estimate to HECO.
- d. The Senior Vice President-Public Affairs, the Government Relations Manager and the Government Relations Director engage in lobbying activities.
- e. The Government Relations Department is responsible for keeping abreast of all governmental matters, administrative and legislative, at the Federal, State and County levels.

One of the Department's functions primarily when the State Legislature is in session is to

review all legislative bills and identify those governmental and legislative proposals which have a potential impact on the Company and its customers. Most of the positions taken by HECO on legislative matters are in the interest of HECO's customers. The propriety of including the costs of HECO's Government Relations Department was addressed in Docket No. 3705. In Decision and Order No. 6275, Docket No. 3705, the Commission said: "We conclude from the foregoing, that HECO should be informed and knowledgeable of governmental regulatory policies and laws affecting utilities and needs to have trained employees to keep abreast and be informed on these matters. Where the expenditures for this activity are reasonable in amount, the Commission believes it is in the public interest to allow same. We conclude the Consumer Advocate's request for disallowance must be

Please provide a copy of all written lobbying/legislative activity logs and other reports produced by HECO/HEI to document and communicate legislative efforts and the status and/or impact of legislation, to be proposed or then pending, to management personnel in 2003, 2004 or 2005, to-date.

HECO Response:

See response to CA ID 675 items 6 thru 8 for information re 1st 1st 1st

HECO provides reports to “management personnel” and HECO’s chief legal officer that include the status of legislation and a brief comment on the potential impact of bills on HECO. The Company objects to providing the internally distributed reports, as these documents are privileged and confidential and should not be provided on public policy grounds, it would be unduly burdensome to produce all such reports because producing such reports would require

value would diminish significantly in the future, and HECO's internal communications would be seriously hampered.

This information request basically requests unlimited access to internal reports concerning HECO's "lobbying/legislative activity". As stated in the objection to CA-IR-242, the information request fails to balance the Consumer Advocate's need for this information against the Company's need to manage.

HECO also objects to disclosure of the requested information under a protective order. The value of the internal reports will be diminished for the reasons stated above if the Company is required to provide the reports to the Consumer Advocate, even if the reports are provided pursuant to a protective order.

CA-IR-677

Ref: HECO response to CA-IR-254 and CA-IR-513, HECO-1310 and HECO-1312 (Government & Community Relations).

Please provide the following:

- a. Does HECO bill HEI for any portion of the test year costs associated with governmental relations and public affairs (see CA-IR-513) that are largely or partially associated with legislative activities? If so, please explain the basis for such cost assignment/allocation and provide the amount billed in 2003 as well as the 2005 test year forecast.
- b. Referring to item (a) above, does HEI record such billings from HECO in Activity COM or LEI or some other activity whose costs are retained by HEI? Please explain. If any such costs are billed back to HECO, please provide the amount thereof included in the 2005 test year forecast

HECO Response:

- a. HECO does not bill HEI for any portion of the test year costs associated with governmental relations and public affairs that are largely or partially associated with legislative activities.
- b. HECO does not bill HEI for costs related to governmental relations and public affairs and HEI's 2005 test year forecast shown on HECO-1310 does not include any costs related to these activities.

CA-IR-678

Ref: HECO responses to CA-IR-251, CA-IR-252 and CA-IR-419 (HEI Billings).

In response to CA-IR-419, HECO stated that it will be updating the 2005 test year forecast of HEI billings to HECO to reflect more current allocation factors and more current estimates. Please provide the following:

- a. Please provide HEI 2004 information, comparable to the 167 page response to CA-IR-251, which supports the 2004 amounts input on pages 3 through 6 of the response to CA-IR-419.
- b. In response to CA-IR-252, the Company provided supporting documentation underlying the HEI allocation factors used in HECO's original test year forecast (HECO-1310) as well as the updated factors applied in the HEI update attached to CA-IR-419. Please provide a copy of all workpapers, spreadsheet files and any other supporting documentation used in quantifying the following updated HECO allocation factors set forth on pages 3 through 6 of the response to CA-IR-419, which do not appear to have been provided in the response to CA-IR-252:
 1. ACC 018: 40.9%
 2. PEN 022: 50.0%
 3. STO 0xx: 67.1% (should be 37.1%)
- c. Please provide a copy of all workpapers, spreadsheet files and any other supporting documentation used to quantify each adjustment to the 2004 actual HEI charges to HECO, as set forth on pages 3 through 6 of the response to CA-IR-419 and briefly described in the footnotes thereto.

HECO Response:

- a. The proforma bill for the period 01/01/04 to 12/31/04 based upon 2004 actual data for labor hours and nonlabor dollars and updated allocation factors (which are actually being used in the 2005 billings to subsidiaries) was run specifically for rate case purposes and excludes incentive compensation from the employee labor rates. The amounts reflected on the proforma bill agree to the 2004 amounts reflected on pages 3 through 6 of the response to CA-IR-419. This proforma bill is voluminous and contains confidential employee labor rates. One copy each will be provided to the Consumer Advocate, the Commission and the

Department of Defense under protective order.

- b. 1. See the Company's response to CA-IR-421, item b. where the Company was asked to revise the Gross Payroll allocation factors to exclude bonus and incentive compensation. This resulted in a change to the general allocator (which includes the gross payroll allocation factor) related to HECO from what was originally shown on CA-IR-252 of 40.2% to 40.9% (shown on CA-IR-421, page 4). The 40.9% (revised general allocator) was used to allocate charges for ACC018.
2. See pages 6 and 7 for the calculations supporting the 50.0% allocation used for PEN022.
3. See the Company's response to CA-IR-252, page 41 for the workpaper supporting the allocation factor used for STO011-STO021 of 37.1% as reflected on CA-IR-419, page 5.
- c. The supporting documentation for the footnotes set forth on pages 3 through 6 of the response to CA-IR-419 are as follows:

Footnote 1: The 2005 inflation adjustment of 2.1% was based upon the Blue Chip Economic Indicators Consumer Price Index (CPI) provided in response to CA-IR-253, page 6.

Footnote 2: The 2004 actual was adjusted to exclude the one-time nonrecurring charge of \$7,000 related to the SEC in-house workshop hosted by HEI and attended by HECO participants. See the supporting details of the adjustment in the intercompany bill for the period 01/01/04 to 12/31/04 provided in response to part a. above, Activity code ACC009, direct nonlabor charge shown on page 18, in the ACC section of the intercompany bill.

Footnote 3: The 2004 actual was adjusted to exclude all costs related to providing rate case assistance to HECO. This adjustment was made to simplify the issues related to this

rate case only. See the supporting details of the adjustment in the intercompany bill for the period 01/01/04 to 12/31/04 provided in response to part a. above, Activity code

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shown on page 53 and shared nonlabor charges of \$110,864.05 shown on pages 54 and 55 in the FIN section of the intercompany bill.

Footnote 8: The 2004 actual was adjusted to exclude the one-time nonrecurring charges of \$6,455.51 related to the code of conduct review. See the supporting details of the adjustment in the intercompany bill for the period 01/01/04 to 12/31/04 provided in response to part a. above, Activity code HUM009, shared nonlabor charges of \$6,455.51 shown on page 62 in the HUM section of the intercompany bill. The 2004 shared labor charges of \$508.01 were not excluded in determining the test year amount because the Company believes that there will be annual updates/reviews of the Code of Conduct.

Footnote 9: The 2004 actual was adjusted to exclude costs related to incentive compensation in order to simplify the issues related to this rate case only. Hence, all charges related to the incentive compensation plans and stock options were removed from the test year estimate. See the supporting details of the adjustment in the intercompany bill for the period 01/01/04 to 12/31/04 provided in response to part a. above, Activity codes HUM011 thru HUM015 on pages 56 - 62.

Footnote 10: A credit adjustment of (\$9,564.84) was made to the 2004 actual internet costs to reflect the current 2005 internet estimate. See page 9 for the supporting workpaper of the 2005 internet costs.

Footnote 11: An adjustment of \$14,071.29 was made to reflect the increase in the annual listing fee (based upon the 2005 actual invoice received from the New York Stock Exchange). See page 10 for the calculation of the adjustment.

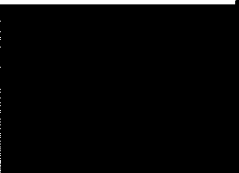
Footnote 12: An adjustment of \$10,203.20 was made to reflect a “normalized” year for stock transfer activities due to less hours actually incurred in 2004 due to time spent on Sarbanes-Oxley 404 compliance. See page 11 for the calculation of the adjustment.

Footnote 13: Adjustments were made to the 2004 actual to reflect costs for the implementation of new IRS forms (M-3), return disclosures and more documentation of tax items in order to be in compliance with Sarbanes-Oxley 404. See page 12 for the supporting workpaper.

Footnote 14: Adjustments were made to include additional time and higher external attestation fees from the Company’s auditor related to Sarbanes-Oxley 404. See page 13 for the supporting workpaper. Employee names were removed from the workpaper because the workpaper contains confidential employee labor rates.

(except as noted) to be used in

Ref Source HECO RHI



Participants %

(E) 2
50.0%

HEI Corp.,
and its financing subs
HEI Capital Trust I
Hycap) & Elim CONS.
2 50.0%
4 100.0%

HEID

Fujimoto, Debbie

From: Hanta, Phyllis
Sent: Monday, February 14, 2005 2:32 PM
To: Fujimoto, Debbie
Subject: RE: Nonqualified Retirement Plans

Source E

HEI Participant Counts as of 1/1/2004

Plan	Comp.	Active Vested	PartVst	NonVst	Total	Trf Out	LTD	VT	Retired Empl	Benef	Total	Grand Total
Non-Qualified Retirement Plans												
HEI SERP	HECO	1	0	0	1	0	0	0	1	0	1	2
	HEI	1	0	0	1	0	0	0	1	0	1	2
	Total	2	0	0	2	0	0	0	2	0	2	4

Confidential Information Deleted Pursuant
to Protective Order No. _____

Page 8 intentionally left blank.

Support for Footnote 10 - Internet

2005 Internet Billing Budget

Last Update: 9/2/04

	2005 Annual	Allocation Factors:			Allocated Amount:		ICB	ICB	
	Expense	HEI	HECO	ASB	HEI	HECO	ASB	activity code	company code
HEI Only									
Verisign:									
Digital Certificate SSL Kahala Annual Fee	0	100%	0%	0%	0	0	0	NONBIL	NOCHG
Domain Name Annual Fee (various)	200	100%	0%	0%	200	0	0	NONBIL	NOCHG
Comtest:									
Cacheflow Maintenance	4,000	100%	0%	0%	4,000	0	0	NONBIL	NOCHG
SmartFilter Annual Subscription	4,000	100%	0%	0%	4,000	0	0	NONBIL	NOCHG
NetEnforcer Maintenance	1,400	100%	0%	0%	1,400	0	0	NONBIL	NOCHG
Network Associates Sniffer Maintenance	2,100	100%	0%	0%	2,100	0	0	NONBIL	NOCHG
Tumbleweed MMS (aka WorldSecure):									
MMS Server SW Maint	4,160	100%	0%	0%	4,160	0	0	NONBIL	NOCHG
Dell 2650 Server & MS SQL WIN Maint	1,500	100%	0%	0%	1,500	0	0	NONBIL	NOCHG
V-One VPN Server Maint (50 seat)	1,500	100%	0%	0%	1,500	0	0	NONBIL	NOCHG
NetEnterprise:									
Engineering Support	1,500	100%	0%	0%	1,500	0	0	NONBIL	NOCHG
Email backup Svc	1,200	100%	0%	0%	1,200	0	0	NONBIL	NOCHG
Commercial Data Systems Off-Hour Support	2,500	100%	0%	0%	2,500	0	0	NONBIL	NOCHG
Oceanic RoadRunner Connection	1,200	100%	0%	0%	1,200	0	0	NONBIL	NOCHG
	25,260				25,260	0	0		
HEI+HEIPC+HECO+ASB (1)									
Commercial Data Systems:									
Sun Firewall Hardware/SW Maint 7x24 Gold	11,000	68%	32%	0%	7,480	3,520 (a)	0	INT002	ALLOC
2-Sunfire 280R SN:135CO43A, SN:122CO66B8)	0	68%	32%	0%	0	0	0	INT002	ALLOC
Enterprise 250 SN:041H2CA0	0	68%	32%	0%	0	0	0	INT002	ALLOC
Secure Technologies Hawaii Inc (STHI):									
Firewall Software Maint (Stonesoft, Checkpoint, ISS)	17,400	68%	32%	0%	11,832	5,568 (a)	0	INT002	ALLOC
Firewall Security Maintenance (include 24 hours T&M)	22,000	68%	32%	0%	14,960	7,040 (a)	0	INT002	ALLOC
	50,400				34,272	16,128	0		
HEI+HECO+ASB									
NetEnterprise:									
2xT1 Internet Circuit & Port Chg (3)	18,450	6.4%	58.6%	35.0%	1,181	10,812 (c)	6,458	INT004	ALLOC
Cisco Router Maintenance (2)	2,000	34%	33%	33%	680	660 (b)	660	INT003	ALLOC
Router Management (2)	3,000	34%	33%	33%	1,020	990 (b)	990	INT003	ALLOC
Sprint:									
2xT1 Internet Circuit & Port Chg (3)	27,000	6.4%	58.6%	35.0%	1,728	15,822 (c)	9,450	INT004	ALLOC
TimeWarner Add'l 6MB Ethernet Internet Bandwidth Install	2,000	6.4%	58.6%	35.0%	128	1,172 (b)	700	INT003	ALLOC
TimeWarner Add'l 6MB Ethernet Internet Bandwidth MRC	24,000	6.4%	58.6%	35.0%	1,536	14,064 (c)	8,400	INT004	ALLOC
Internet Connection Installation Fee (2)	1,000	34%	33%	33%	340	330 (b)	330	INT003	ALLOC
ARIN ASN Maintenance (2)	100	34%	33%	33%	34	33 (b)	33	INT003	ALLOC
	77,550				6,647	43,883	27,021		
HEI+HECO									
FTP Server - Dell 2650 Hdwr/sw Maint (4)	1,000	10%	90%	0%	100	900 (d)	0	INT005	ALLOC
	1,000				100	900	0		
Total Expense	154,210				66,279	60,911	27,021		
Capital Depreciation Expense									
HEI Only	16,773	100%	0%	0%	16,773	0	0	NONBIL	NOCHG
HEI+HEIPC+HECO+ASB (1)	1,117	68%	32%	0%	760	357 (a)	0	INT002	ALLOC
HEI+HECO+ASB (2)	6,557	34%	33%	33%	2,229	2,164 (b)	2,164	INT003	ALLOC
HEI+HECO (4)	87	10%	90%	0%	9	78 (d)	0	INT005	ALLOC
Total Depreciation	24,534				19,771	2,599	2,164		
TOTAL INTERNET	178,744				86,050	63,510	29,185		
FrontBridge (Bigfish) Email & Virus filtering service (5)	900	100%	0%	0%	900	0	0	INT001	ALLOC
TOTAL INTERNET + FRONTBRIDGE	179,644				86,950	63,510	29,185		

(1) Allocation factors include upgrades and higher security requirements to support HEI/PC international communications requirements.

(2) Fixed allocation costs split equally.

(3) Allocation based on internet traffic study

(4) Allocation based on FTP account ratio

(5) Allocation based on FrontBridge e-mail traffic study

		Estimated 2005 costs
INT002	Σ (a)	16,485
INT003	Σ (b)	5,349
INT004	Σ (c)	40,698
INT005	Σ (d)	978
		<u>63,510</u>

Support for Footnote 11 - Stock Transfer

		<u>Period</u>		<u>Nonlabor chg</u>	<u>Allocation Factor</u>	<u>HECO Charge</u>	
STO019	Vendor: NYSE	2005	(a)	\$ 77,075.00	37.1%	\$28,594.83	Revised estimate based upon actual 2005 invoice
STO019	Vendor: NYSE	2/29/04	(b)	\$ 39,147.00	37.1%	\$14,523.54	2004 actual (see page 34 of the STO interco. bill)

Increase in NYSE listing fees (a) - (b)	<u>\$37,928.00</u>	<u>\$14,071.29</u>	Adjustment required
---	--------------------	--------------------	---------------------

Support for Footnote 12 - Stock Transfer

Per HECO-1310, page 3

2003 STO shared hours	8,655.50
2003 STO direct labor hours	109.70
	<u>8,765.20</u>

Per response to question b. of CA-IR-251

2004 STO shared hours	8,465.65
2004 STO direct labor hours	87.00
	<u>8,552.65</u>

Less hours incurred in 2004 than in 2003 due to time normally spent on stock transfer activities spent on SOX 404 work (will need to catch-up on backlog of work in 2005).

Difference

212.55

Say approximately 200 hours to be incurred in a "normal" year

		12/31/04	2005	
	Addl Hours	Labor	Addl	
	2005	Rate	Charges	Comments
STO019 Stock transfer division exp	200	51.016	10,203.20	Ave 12/31/04 labor rate for all Shareholder Svcs employees

The 2004 actual was adjusted to reflect additional billable hours related to stock transfer activities.

Support for Footnote 13 - Taxes

		Estimated	Actual	(a)	(b)	(a) x (b)
		Hours	Hours	Addl Hours	12/31/04	2005
		2005	2004	2005	Labor	Addl
					Rate	Charges
TAX001	Tax return preparation	900	517.68	382.32	53.62	20,500.00
TAX002	Tax return review	200	137.50	62.50	107.845	6,740.31
TAX006	Tax research	350	179.01	170.99	89.77	15,349.77
TAX007	Tax accrual review	500	263.50	236.50	89.77	21,230.61

TAX019	Taxes-Sarbanes Oxley Related Charges	100	240.00	-140.00	81.8225	(11,455.15)
TAX020	Tax Depreciation	150	336.50	-186.50	53.62	(10,000.13)

The increased hours are for the implementation of new IRS forms (M-3), return disclosures and more documentation of tax items to be in compliance with Sarbanes-Oxley Section 404.

Support for Footnote 14
Estimated 2005 SOX Charges

ICB activity code	RPT098	INV022	PEN010	STO021	TAX019
	Fin Rptng	Investor Relations	Pension	Stock Transfer	Taxes
Total estimated 2005 SOX hours:	310.34	104.50	82.98	256.25	270.83
12/04 loaded labor rate for employees (averaged)	\$ 59.66	\$ 59.66	\$ 59.66	\$ 59.66	\$ 59.66
Estimated 2005 SOX charges	\$ 18,514.88	\$ 6,234.47	\$ 4,950.59	\$ 15,287.88	\$ 16,157.72
2005 allocation factors	40.0%	39.7%	66.9%	37.1%	33.0%
HECO's allocated charges	\$ 7,405.95	\$ 2,475.08	\$ 3,311.94	\$ 5,671.80	\$ 5,332.05
Auditor's attestation charges:					
2004 actual auditor attestation fees	195,000.00				
General excise tax	8,124.87				
	203,124.87				
2005 allocation factor to HECO	40.0%				
HECO's allocated charges for auditor's attestation fees	\$ 81,249.95				
	\$ 88,655.90				
Less: 2004 actual charges	(54,582.99)				
	<u>\$ 34,072.91</u>				

Due to the voluminous and confidential nature of the information, one copy (page 8 and pages 14-188) will be provided to the Consumer Advocate, the Public Utilities Commission and the Department of Defense under protective order and under separate transmittal.

CA-IR-679

Ref: HECO response to CA-IR-423 (HEI Billings).

In response to the referenced response, HECO indicated that subsidiaries “derive their equity from two sources: parent company equity infusions (common stock or paid in capital) or earnings left by the parent company in the subsidiary (retained earnings) after taking into account the respective companies’ regulatory requirements.” Please provide the following:

- a. Please provide all equity infusions to each individual subsidiary operation by year since 1995 (i.e., the last rate case).
- b. For each subsidiary operation, please identify and describe the “respective companies’ regulatory requirements.”

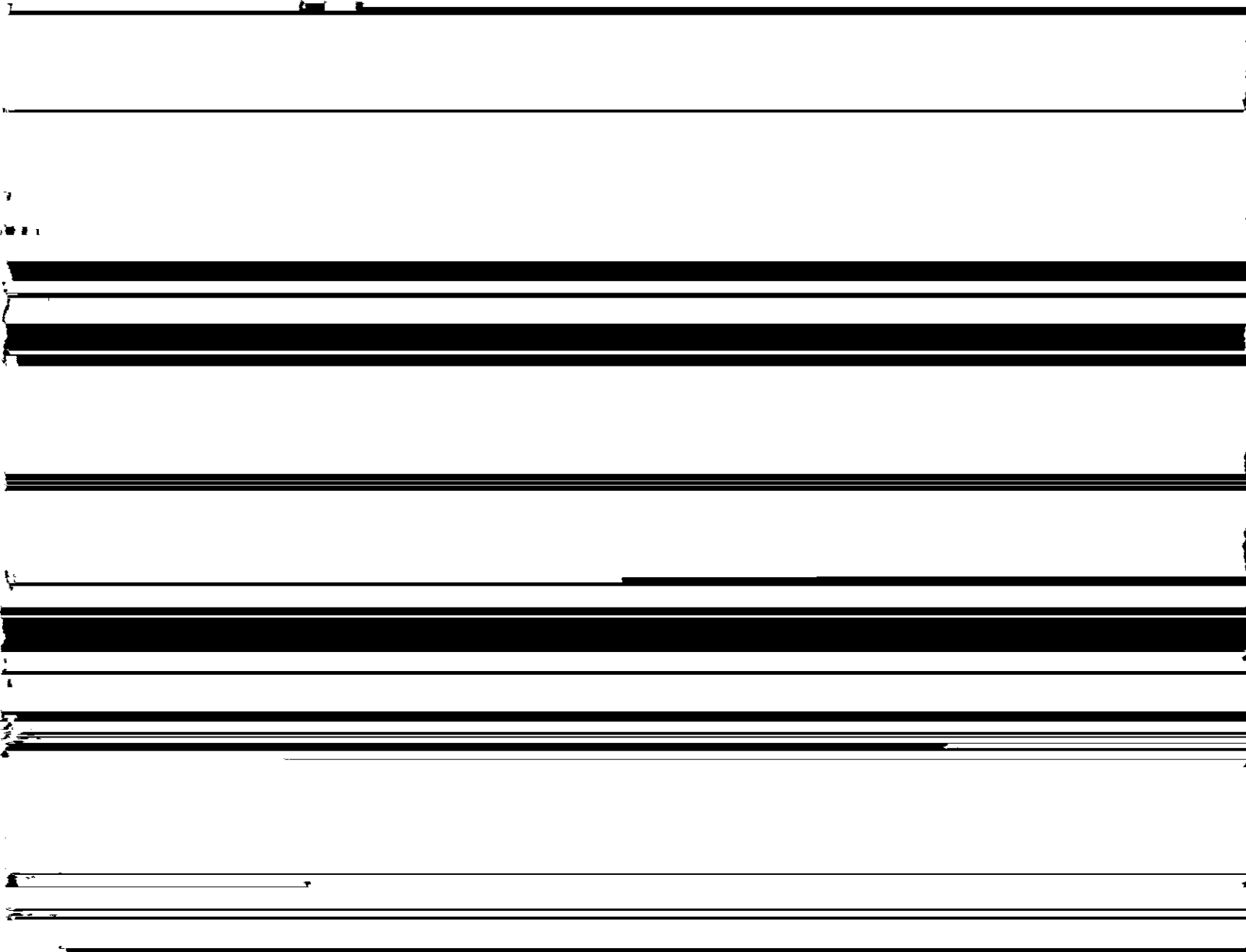
HECO Response:

- a. See pages 3 to 6 for the equity infusions to each individual subsidiary since 1995.
- b. **Regulation of Utilities:** Under the HECO/HEI Merger Agreement dated September 23, 1982 as a result of Docket No. 4337, (“PUC Agreement”), in the event that the consolidated common stock equity of the electric utility subsidiaries falls below 35% of total electric utility capitalization (including in capitalization the current maturities of long-term debt, but excluding short-term borrowings), the electric utility subsidiaries would be restricted, unless they obtained PUC approval, in their payment of cash dividends to 80% of the earnings available for the payment of dividends in the current fiscal year and preceding five years, less the amount of dividends paid during that period. The PUC Agreement also provides that the foregoing dividend restriction shall not be construed to relinquish any right the PUC may have to review the dividend policies of the electric utility subsidiaries.

Regulation of ASB. ASB is subject to examination and comprehensive regulation by the OTS and the FDIC, and is subject to reserve requirements established by the Board of Governors of the Federal Reserve System. By reason of the regulation of its subsidiary, ASB

Realty Corporation, ASB is also subject to regulation by the Hawaii Commissioner of Financial Institutions. Regulation by these agencies focuses in large measure on the adequacy of ASB's capital and the results of periodic "safety and soundness" examinations conducted by the OTS. ASB's insurance product sales activities, including those conducted by ASB's insurance agency subsidiary, Bishop Insurance Agency of Hawaii, Inc., are subject to regulation by the Hawaii Insurance Commissioner.

The OTS, which is ASB's principal regulator, administers two sets of capital standards—
minimum regulatory capital requirements and prompt corrective action requirements. The



Hawaiian Electric Industries, Inc. (HEI)

**Common stock equity infusions (includes capital contributions and common stock issuances)
to each individual subsidiary operation by year since 1995**

(in thousands)

HEI equity infusions into Hawaiian Electric Company, Inc. (HECO)

1995	28,000
1996	30,000

HECO equity infusions into Hawaii Electric Light Company, Inc.

1995	9,000
1998	9,000

HECO equity infusions into Maui Electric Company, Limited

1995	12,000
1996	17,000
1998	6,000

HECO equity infusions into HECO Capital Trust I

1997	1,546
------	-------

HECO equity infusions into HECO Capital Trust II

1998	1,546
------	-------

HECO equity infusions into HECO Capital Trust III

1998	1,546
------	-------

HECO equity infusions into Renewable Hawaii, Inc.

2003	181
2004	300

Hawaiian Electric Industries, Inc. (HEI)

**Common stock equity infusions (includes capital contributions and common stock issuances)
to each individual subsidiary operation by year since 1995**

(in thousands)

HEI equity infusions into HEI Diversified, Inc. (HEIDI)

1999	3,300
------	-------

HEIDI equity infusions into American Savings Bank, F.S.B. (ASB)

1995	11,972
1996	10,102
1997	85,993
1998	1,029
1999	796
2000	741
2001	1,650
2002	842
2003	940
2004	75,933 Note A

Note A: ASB redeemed its preferred stock held by HEIDI (\$75 million) and HEIDI infused common equity into ASB (\$75 million)

HEI equity infusions into Pacific Energy Conservation Services, Inc.

1995	110
1996	100
1998	100
1999	80
2000	100
2001	50
2002	50
2003	40
2004	70

Note A: ASB redeemed its preferred stock held by HEIDI (\$75 million) and HEIDI infused common equity into ASB (\$75 million)

Hawaiian Electric Industries, Inc. (HEI)

Common stock equity infusions (includes capital contributions and common stock issuances)

to each individual subsidiary operation by year since 1995
(in thousands)

HEI equity infusions into HEI Properties, Inc.

2002	25
------	----

HEI equity infusions into Hycap Management, Inc.

1997	18,364
------	--------

HEI equity infusions into Hawaiian Electric Industries Capital Trust I

1997	3,093
------	-------

HEI equity infusions into HEI Leasing, Inc.

2000	10
------	----

HEI equity infusions into HEI District Cooling, Inc.

1998	850
1999	400

HEI equity infusions into ProVision Technologies, Inc.

1998	10
1999	105
2000	375
2001	520
2002	250
2003	105

Hawaiian Electric Industries, Inc. (HEI)

**Common stock equity infusions (includes capital contributions and common stock issuances)
to each individual subsidiary operation by year since 1995**

(in thousands)

HEI equity infusions into Malama Pacific Corp. (MPC)

1997	7,000	
1998	2,500	
2002	15,000	Note B

Note B: MPC Note Payable to HEI converted to common stock equity (\$15 million)

HEI equity infusions into HEI Power Corp. (HEIPC)

1995	500
1997	11,400
1998	24,331
1999	8,818
2000	89,000

Note: ASB and HEIPC equity infusions into their subsidiaries are not provided

CA-IR-680

Ref: HECO-901 (Customer Accounts Expense).

Please update HECO-901 to include 2004 actual results.

HECO Response:

Please see pages 2 and 3 for HECO-901 that has been updated for 2004 actual results.

HAWAIIAN ELECTRIC COMPANY, INC.
CUSTOMER ACCOUNTS EXPENSE
2000-2005

(\$ THOUSANDS)

CUSTOMER ACCOUNTS	RECORDED					FORECAST		Budget	TEST
	2000	2001	2002	2003	2004	2004	2005	Adjustment	YEAR
901.00 Supervision	324	329	633	620	854	729	930		930
902.00 Meter Reading Expenses	2,209	2,196	2,114	2,085	2,413	2,503	2,524		2,524
903.00 Cust Records & Collection	7,773	6,811	6,405	6,335	7,048	7,163	7,984	(2)	7,982
905.00 Misc. Customer Accounts	11	3	2	0	2	0	0		0
Subtotal	10,317	9,339	9,154	9,040	10,317	10,395	11,438	(2)	11,436
904.00 Uncollectible Accounts	854	774	737	1,015	413	1,036	1,082	210	1,292
Total Customer Account Expense	11,171	10,113	9,891	10,055	10,730	11,431	12,520	208	12,728

Note: Account 904-Uncollectible Account for 2005 test year is at present rates.

Source: HECO-WP-101(B), pages 9 and 10 for Recorded 2000 to 2003 and Forecast 2004 and 2005 amounts.
Recorded 2004 from CA-IR-13 response data file.

HAWAIIAN ELECTRIC COMPANY, INC.
CUSTOMER ACCOUNTS EXPENSE - LABOR AND NON-LABOR
2000-2005

(\$ THOUSANDS)

LINE	CUSTOMER ACCOUNTS	RECORDED					FORECAST		Budget ADJ.	TEST YEAR 2005
		2000	2001	2002	2003	2004	2004	2005		
	<u>Account 901 - Supervision</u>									
1	Labor	86	71	56	60	41	98	117		117
2	Non-labor	<u>238</u>	<u>258</u>	<u>577</u>	<u>560</u>	<u>813</u>	<u>631</u>	<u>813</u>		<u>813</u>
3	TOTAL	<u>324</u>	<u>329</u>	<u>633</u>	<u>620</u>	<u>854</u>	<u>729</u>	<u>930</u>		<u>930</u>
	<u>Account 902 - Meter Reading</u>									
4	Labor	1,784	1,778	1,717	1,847	1,963	2,151	2,174		2,174
5	Non-labor	<u>425</u>	<u>418</u>	<u>397</u>	<u>238</u>	<u>450</u>	<u>352</u>	<u>350</u>		<u>350</u>
6	TOTAL	<u>2,209</u>	<u>2,196</u>	<u>2,114</u>	<u>2,085</u>	<u>2,413</u>	<u>2,503</u>	<u>2,524</u>		<u>2,524</u>
	<u>Account 903 - Cust Rec. & Collection</u>									
7	Labor	3,748	3,657	3,647	3,724	4,011	4,074	4,553		4,553
8	Non-labor	<u>4,025</u>	<u>3,154</u>	<u>2,759</u>	<u>2,611</u>	<u>3,037</u>	<u>3,089</u>	<u>3,431</u>	(2)	<u>3,429</u>
9	TOTAL	<u>7,773</u>	<u>6,811</u>	<u>6,406</u>	<u>6,335</u>	<u>7,048</u>	<u>7,163</u>	<u>7,984</u>	(2)	<u>7,982</u>
	<u>Account 905 - Misc Cust Accts.</u>									
10	Labor	11	3	2	0	2	0	0		0
11	Non-labor									
12	TOTAL	<u>11</u>	<u>3</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>0</u>		<u>0</u>
	<u>Sub total 901,902,903,905</u>									
13	Labor	5,629	5,509	5,422	5,631	6,017	6,323	6,844	0	6,844
14	Non-Labor	<u>4,688</u>	<u>3,830</u>	<u>3,733</u>	<u>3,409</u>	<u>4,300</u>	<u>4,072</u>	<u>4,594</u>	(2)	<u>4,592</u>
15	TOTAL	<u>10,317</u>	<u>9,339</u>	<u>9,155</u>	<u>9,040</u>	<u>10,317</u>	<u>10,395</u>	<u>11,438</u>	(2)	<u>11,436</u>
	<u>Account 904 - Uncollectible Accts.</u>									
16	Non-labor	854	774	736	1,015	413	1,036	1,082	210	1,292
17	TOTAL	<u>854</u>	<u>774</u>	<u>736</u>	<u>1,015</u>	<u>413</u>	<u>1,036</u>	<u>1,082</u>	<u>210</u>	<u>1,292</u>
18										
	<u>Total Customer Accounts</u>									
	Labor	5,629	5,509	5,422	5,631	6,017	6,323	6,844	0	6,844
	Non-labor	<u>5,542</u>	<u>4,604</u>	<u>4,469</u>	<u>4,424</u>	<u>4,713</u>	<u>5,108</u>	<u>5,676</u>	<u>208</u>	<u>5,884</u>
	TOTAL	<u>11,171</u>	<u>10,113</u>	<u>9,891</u>	<u>10,055</u>	<u>10,730</u>	<u>11,431</u>	<u>12,520</u>	<u>208</u>	<u>12,728</u>
	+/- previous year		-1,058	-222	164	675	1,376	1,089		1,297
	% +/- previous year		-9.5%	-2.2%	1.7%	6.7%	13.7%	9.5%		11.3%

Source: HECO-WP-101(B), pages 9 and 10 for Recorded 2000 to 2003 and Forecast 2004 and 2005 amounts.
Recorded 2004 from CA-IR-13 response data file.

CA-IR-681

Ref: HECO-901, HECO-905 and HECO-906 (Uncollectibles).

Please provide the following information:

- a. HECO-901 includes a multi-year comparison of the charges to Account 904, Uncollectible Expense. Please confirm that the historical information for calendar years 2000-2003 reflect accrual basis accounting for uncollectible expense. If this cannot be confirmed, please explain.
- b. Referring to item (a) above, please describe the methodology employed by HECO to determine the monthly amount of uncollectible expense recorded in Account 904 and provide a copy of the supporting documentation showing how that methodology was applied for a recent, representative month.
- c. Please provide the source data underlying the \$832,000,000 of estimated electric sales revenues for the test year, appearing on HECO-905, and reconcile that amount with the Company's forecast of electric sales revenue under present rates of \$994,032,000 (HECO-2301).
- d. Referring to HECO T-9 (page 20) and HECO-906, please provide the graph and underlying electric sales revenues and net write-offs used to generate HECO-906 as well as the 0.10% factor for the period ending April 2004. Please provide the information in both hard copy and an Excel spreadsheet file.
- e. Referring to HECO-905, please provide the calculation details underlying the 0.13% uncollectible factor.

HECO Response:

- a. Yes. The historical information for calendar years 2000-2003 reflect accrual basis accounting for uncollectible expense.
- b. Please see Attachment 1, Pages 1 and 2 describing the methodology employed by HECO to determine the monthly amount of uncollectible expense recorded in Account 904. Please see Attachment 1, Pages 3 through 5 showing how that methodology was applied for April 2005.
- c. The \$832,000,000 amount shown on line 1 of HECO-905 is not "the estimated sales

revenues for the test year”. The electric sales revenues for the test year at present and proposed rates are shown on line 4 (\$994,032,000) and line 7 (\$1,091,883,000) of HECO-905. The 2005 budget number shown on line 1 is based on different fuel and purchased energy prices and expenses, which affect ECAC revenues, and includes a rate relief assumption in the 4th quarter. There is no reconciliation between the budget number and the test year numbers. The \$832,000,000 number also is irrelevant to the rate case. The Uncollectible Accounts expense is simply the product of the Uncollectible factor and the test year revenues.

- d. Please see Attachment 2, Pages 1 through 8 showing the underlying electric sales revenues and net write-offs used to generate HECO-906. On Page 8, the last entry shows the .010% factor for the period ending April 2004. Please see Attachment 2, Page 9 showing the graph depicting the write-off percentages by month. This is the same data that is on HECO-906.
- e. Please see Attachment 3, Pages 1 through 4 which shows the calculation details underlying

the 0.12% uncollectible factor

15

ON BILLED REVENUES

On a monthly basis, a recurring journal entry is prepared by the Corporate Accountant to record a provision for uncollectible accounts for billed revenues. The current month's provision is determined as follows:

<u>Cumulative A/R net write-offs for the 12 months ending current period</u>	X	Current Month's
Cumulative Billed Revenues for the 12 months ending four months prior to the current period		Billed Revenues

*Net write-offs=write-offs less recoveries

The Credit Manager will review the "Inactive Accounts with Arrear Balances greater than \$999.99" Report (CSF272-01) for any large commercial accounts and initial the report to indicate review. If there are any which are likely to be uncollectible due to the filing for bankruptcy, the Credit Manager will inform the Corporate Accountant via e-mail that an adjustment may need to be made to the provision balance and provide the amount of adjustment.

Bad debt expense for the month is determined by comparing the balance in the provision account at month end to the total of the previous four months' monthly provisions. A journal entry is prepared to adjust for the difference arising from the comparison and posted to Ellipse by the Corporate Accountant. Once the entry has been journalized, the Corporate Accountant verifies that the balance in the "Allowance for Bad Debt – Billed Revenues" account 144010 reflects the four-month provision amount and signs off on the checklist in the Recurring Journal binder to indicate verification. The Lead Corporate Accountant then reviews and signs off on this posted journal entry.

After the month end closing is completed, the write-off percentage worksheet (% applied to billed revenues to determine current month provision) and the net write-off schedule (breakdown of provision, write-off, and recoveries by month) is e-mailed to the Credit Manager and the Credit Analyst. This information is used to prepare the Credit Division Monthly Report for the Manager of the Customer Service Department. Beginning with the June 2004 closing, the Credit Manager also reviews the provision amount on a monthly basis for reasonableness and informs the Corporate Accountant via e-mail if any adjustments need to be made to the provision.

A reconciliation of Account 144010 is performed on a monthly basis by the Corporate Accountant and reviewed by the Lead Corporate Accountant.

ON UNBILLED REVENUES

On a monthly basis, a recurring journal entry is prepared by the Corporate Accountant to record a provision for uncollectible accounts for unbilled revenues. The allowance at the end of the month is determined as follows:

<u>Cumulative AVR net write-offs for the 12 months ending current period</u>	X	End of Month
Cumulative Billed Revenues for the 12 months ending four months prior to the current period		Accrued Unbilled Revenues

*Net write-offs=write-offs less recoveries

A journal entry is prepared by the Corporate Accountant to adjust the current balance in the "Allowance for Bad Debt-Unbilled" Account 144020 so that it reflects the allowance calculated above. The journal entry is posted into Ellipse by the Corporate Accountant. Once the entry has been journalized, the Corporate Accountant verifies that the balance in the "Allowance for Bad Debt-Unbilled" Account 144020 is correct.

HECO

Computation of bad debt write off %
After 1990 adjustments

Net Write-Offs			Billed Revenues			% Write-off col D/col I
	Current Month	Cumulative 12 Months		Current Month	Cumulative 12 Months	
12/02	128,326	764,393	8/02	75,815.2	848,860.0	0.00090
1/03	41,246	792,559	9/02	77,522.3	844,623.1	0.00094
2/03	28,644	792,473	10/02	79,002.2	845,847.8	0.00094
3/03	34,835	831,944	11/02	77,134.5	850,081.3	0.00098
4/03	44,214	840,975	12/02	76,889.1	858,635.7	0.00098
5/03	134,704	683,004	1/03	77,215.8	869,367.4	0.00079
6/03	150,355	795,584	2/03	74,067.7	882,400.9	0.00090
7/03	133,870	970,816	3/03	78,274.2	899,062.1	0.00108
8/03	58,455	952,196	4/03	78,436.6	911,131.8	0.00105
9/03	44,059	937,554	5/03	79,393.6	923,370.9	0.00102
10/03	100,376	958,486	6/03	83,572.6	933,521.6	0.00103
11/03	52,368	951,452	7/03	80,836.2	938,160.0	0.00101
12/03	152,308	975,434	8/03	83,607.6	945,952.4	0.00103
1/04	21,114	955,302	9/03	85,032.7	953,462.8	0.00100
2/04	36,046	962,704	10/03	82,077.9	956,538.5	0.00101
3/04	46,968	974,837	11/03	80,290.7	959,694.7	0.00102
4/04	34,802	965,425	12/03	77,978.6	960,784.2	0.00100
5/04	(18,728)	811,993	1/04	80,024.8	963,593.2	0.00084
6/04	45,366	707,004	2/04	78,885.0	968,410.5	0.00073
7/04	15,074	588,208	3/04	79,305.9	969,442.2	0.00061
8/04	16,928	546,681	4/04	80,766.9	971,772.5	0.00056
9/04	59,638	562,260	5/04	80,634.4	973,013.3	0.00058
10/04	30,561	492,445	6/04	85,451.4	974,892.1	0.00051
11/04	127,336	567,413	7/04	87,481.6	981,537.5	0.00058
12/04	118,950	534,055	8/04	89,713.8	987,643.7	0.00054
1/05	(10,038)	502,903	9/04	93,947.0	996,558.0	0.00050
2/05	23,051	489,908	10/04	94,699.7	1,009,179.8	0.00049
3/05	25,056	467,996	11/04	93,707.1	1,022,596.2	0.00046
4/05	7,428	440,622	12/04	91,395.8	1,036,013.4	0.00043
			1/05	93,144.6	1,049,133.2	
			2/05	81,833.2	1,052,081.4	
			3/05	80,812.1	1,053,587.6	
			4/05	83,813.5	1,056,634.2	

* \$256,114.76 write-offs less recoveries of \$207,279.44 less \$20,357.87 of accounts which should have been written off in 1990 but were written off in 1/91

** \$188,866.65 write-offs less recoveries of \$11,693.63 less \$50,451.26 of accounts which should have been written off in 1990 but were written off in 2/91

*** Does not include \$524,147.74 of 1990 accounts which were written off in 3/91 directly to bad debt expense.

HECO

Accrual for Uncollectible Accounts & Deferred Taxes

2005 Billed Electric Revenues

DR PCD 618 OAH NE NPCZZZZ 900
CR 14401000

	(B)	(C)	(D) (B)*(C)	(E)	(F)	(G)	(H)	(I)
		(1)	Theoretical Provision	Allowance Should Be 4 Mos Reserve	Book Bal Before Adjust (Intermediate a/c 144010)	Bad Debt Expense For Month	Tax Bad Debt (Net Write-off) 14401017 14401015	(H)-(G)
Billed Electric Revenues	Ratio							Timing Difference
	10/04		48,296.85					
	11/04		54,350.10					
	12/04		49,353.71					
Jan	0.00050		46,572.31	198,572.97	216,527.64	(17,954.67)	21,113.67	39,068.34
Feb	0.00049		40,098.26	190,374.38	175,522.29	14,852.09	36,045.85	21,193.76
Mar	0.00046		37,173.57	173,197.85	165,317.96	7,879.89	46,967.97	39,088.08
Apr	0.00043		36,039.81	159,883.95	165,769.94	(5,885.99)	34,802.43	40,688.42
May	0.00	#REF!	#REF!	#REF!		#REF!	(18,728.29)	#REF!
Jun	0.00	#REF!	#REF!	#REF!		#REF!	45,365.81	#REF!
Jul	0.00	#REF!	#REF!	#REF!		#REF!	15,074.05	#REF!
Aug	0.00	#REF!	#REF!	#REF!		#REF!	16,928.44	#REF!
Sep	0.00	#REF!	#REF!	#REF!		#REF!	59,638.08	#REF!
Oct	0.00	#REF!	#REF!	#REF!		#REF!	30,561.07	#REF!
Nov	0.00	#REF!	#REF!	#REF!		#REF!	127,336.44	#REF!
Dec	0.00	#REF!	#REF!	#REF!		#REF!	118,949.58	#REF!
							534,055.10	

339,603,423.16

534,055.10

CA-IR-681
DOCKET NO. 04-0113
ATTACHMENT 1
PAGE 4 OF 5

Verified balance to Ellipse

HECO

**Accum Provision for Unbilled Bad Debt (Account 14402000)
2005**

	(B)	(C)	(D)	(E)	(F)
	EOM Balance		(B)*(C)	Bad Debt Exp.for Mo.	DR <CR>
	Before Adjust	(1)	Allowance	DR PCD 618 OAH	Allowance
	17300000	Ratio	Should Be	NE NPCZZZZZ 900	Balance
				CR 14402000	14402000
Balance, 1/1/05					(30,033.40)
Jan	49,581,697.88	0.00050	(24,790.85)	(5,242.55)	(24,790.85)
Feb	44,561,839.00	0.00049	(21,835.30)	(2,955.55)	(21,835.30)
Mar	45,314,887.60	0.00046	(20,844.85)	(990.45)	(20,844.85)
Apr	48,538,799.04	0.00043	(20,871.68)	26.83	(20,871.68)
May		0.00000	0.00	(20,871.68)	0.00
Jun		0.00000	0.00	0.00	0.00
Jul		0.00000	0.00	0.00	0.00
Aug		0.00000	0.00	0.00	0.00
Sep		0.00000	0.00	0.00	0.00
Oct		0.00000	0.00	0.00	0.00
Nov		0.00000	0.00	0.00	0.00
Dec		0.00000	0.00	0.00	0.00
				<u>(30,033.40)</u>	

(1) See "Bad Debt Provision" section in Permanent File Binder.

NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
Jan-82	2,033.862	Sep-81	507,718.6	0.401
Feb-82	2,098.632	Oct-81	514,413.3	0.408
Mar-82	2,227.631	Nov-81	545,761.7	0.408
Apr-82	2,358.371	Dec-81	559,784.7	0.421
May-82	2,543.756	Jan-82	567,704.2	0.448
Jun-82	2,564.916	Feb-82	572,143.8	0.448
Jul-82	2,616.797	Mar-82	573,390.1	0.456
Aug-82	2,777.685	Apr-82	573,523.3	0.484
Sep-82	2,873.202	May-82	575,074.4	0.500
Oct-82	2,944.105	Jun-82	577,166.2	0.510
Nov-82	2,906.009	Jul-82	578,889.1	0.502
Dec-82	2,980.971	Aug-82	580,138.5	0.514
Jan-83	3,063.988	Sep-82	577,403.5	0.531
Feb-83	3,090.305	Oct-82	577,177.0	0.535
Mar-83	2,955.529	Nov-82	576,794.5	0.512
Apr-83	2,919.558	Dec-82	573,107.0	0.509
May-83	2,733.753	Jan-83	566,815.8	0.482
Jun-83	2,754.429	Feb-83	559,404.9	0.492
Jul-83	2,661.546	Mar-83	553,446.0	0.481
Aug-83	2,487.398	Apr-83	548,221.3	0.454
Sep-83	2,343.056	May-83	541,394.6	0.433
Oct-83	2,246.640	Jun-83	533,295.6	0.421
Nov-83	2,124.208	Jul-83	524,590.3	0.405
Dec-83	2,005.434	Aug-83	514,749.7	0.390
Jan-84	1,808.114	Sep-83	506,987.8	0.357
Feb-84	1,728.612	Oct-83	501,369.1	0.345
Mar-84	1,778.231	Nov-83	497,799.8	0.357
Apr-84	1,592.671	Dec-83	501,337.9	0.318
May-84	1,576.787	Jan-84	506,936.0	0.311
Jun-84	1,407.720	Feb-84	510,995.0	0.275
Jul-84	1,312.193	Mar-84	512,413.0	0.256
Aug-84	1,255.320	Apr-84	514,063.5	0.244

* Formula: net write-offs / sales revenue * 100

NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
Sep-84	1,350.118	May-84	517,566.9	0.261
Oct-84	1,319.516	Jun-84	520,873.2	0.253
Nov-84	1,201.643	Jul-84	525,780.9	0.229
Dec-84	1,237.382	Aug-84	528,831.6	0.234
Jan-85	1,318.489	Sep-84	531,175.9	0.248
Feb-85	1,242.282	Oct-84	533,397.8	0.233
Mar-85	1,194.956	Nov-84	531,344.0	0.225
Apr-85	1,177.738	Dec-84	528,574.5	0.223
May-85	1,075.109	Jan-85	523,993.1	0.205
Jun-85	1,045.225	Feb-85	522,454.6	0.200
Jul-85	1,099.767	Mar-85	522,678.6	0.210
Aug-85	1,118.953	Apr-85	522,904.2	0.214
Sep-85	934.764	May-85	520,273.7	0.180
Oct-85	918.606	Jun-85	519,900.7	0.177
Nov-85	962.238	Jul-85	517,144.2	0.186
Dec-85	868.643	Aug-85	512,851.3	0.169
Jan-86	816.399	Sep-85	509,445.4	0.160
Feb-86	811.962	Oct-85	503,121.3	0.161
Mar-86	818.238	Nov-85	500,462.1	0.163
Apr-86	803.196	Dec-85	497,108.2	0.162
May-86	836.928	Jan-86	496,144.0	0.169
Jun-86	826.580	Feb-86	494,859.2	0.167
Jul-86	760.305	Mar-86	493,686.9	0.154
Aug-86	704.972	Apr-86	487,968.6	0.144
Sep-86	694.743	May-86	478,483.9	0.145
Oct-86	720.736	Jun-86	465,677.1	0.155
Nov-86	660.796	Jul-86	391,358.2	0.169
Dec-86	637.649	Aug-86	446,869.9	0.143
Jan-87	617.808	Sep-86	438,386.3	0.141
Feb-87	629.298	Oct-86	427,605.7	0.147
Mar-87	518.839	Nov-86	416,620.8	0.125
Apr-87	499.184	Dec-86	407,396.5	0.123

* Formula: net write-offs / sales revenue * 100

NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
May-87	492.659	Jan-87	395,370.2	0.125
Jun-87	444.516	Feb-87	385,515.2	0.115
Jul-87	445.797	Mar-87	378,102.0	0.118
Aug-87	439.740	Apr-87	376,223.5	0.117
Sep-87	469.029	May-87	379,683.0	0.124
Oct-87	401.798	Jun-87	384,637.8	0.104
Nov-87	457.845	Jul-87	390,102.3	0.117
Dec-87	446.433	Aug-87	396,565.0	0.113
Jan-88	412.685	Sep-87	406,162.4	0.102
Feb-88	403.048	Oct-87	416,506.7	0.097
Mar-88	403.312	Nov-87	425,250.8	0.095
Apr-88	424.545	Dec-87	431,940.4	0.098
May-88	423.908	Jan-88	439,083.1	0.097
Jun-88	458.562	Feb-88	444,598.3	0.103
Jul-88	458.082	Mar-88	446,345.6	0.103
Aug-88	455.654	Apr-88	446,279.3	0.102
Sep-88	459.671	May-88	444,760.0	0.103
Oct-88	460.877	Jun-88	442,367.9	0.104
Nov-88	419.258	Jul-88	439,385.6	0.095
Dec-88	418.360	Aug-88	435,886.5	0.096
Jan-89	435.087	Sep-88	429,650.9	0.101
Feb-89	431.798	Oct-88	424,576.7	0.102
Mar-89	431.050	Nov-88	421,078.1	0.102
Apr-89	404.339	Dec-88	416,459.3	0.097
May-89	396.772	Jan-89	412,172.1	0.096
Jun-89	359.645	Feb-89	409,033.2	0.088
Jul-89	393.515	Mar-89	408,932.6	0.096
Aug-89	409.388	Apr-89	409,493.1	0.100
Sep-89	360.579	May-89	412,363.2	0.087
Oct-89	353.362	Jun-89	418,177.1	0.085
Nov-89	404.568	Jul-89	424,766.8	0.095
Dec-89	427.635	Aug-89	431,182.2	0.099

* Formula: net write-offs / sales revenue * 100

NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
Jan-90	495.325	Sep-89	436,957.5	0.113
Feb-90	522.564	Oct-89	441,671.9	0.118
Mar-90	543.253	Nov-89	443,868.3	0.122
Apr-90	511.135	Dec-89	447,363.2	0.114
May-90	519.877	Jan-90	453,254.4	0.115
Jun-90	536.764	Feb-90	459,189.4	0.117
Jul-90	529.714	Mar-90	465,656.3	0.114
Aug-90	497.017	Apr-90	475,235.1	0.105
Sep-90	509.471	May-90	483,209.4	0.105
Oct-90	524.832	Jun-90	486,568.7	0.108
Nov-90	516.692	Jul-90	486,297.8	0.106
Dec-90	511.374	Aug-90	484,215.2	0.106
Jan-91	445.200	Sep-90	482,931.4	0.092
Feb-91	508.074	Oct-90	487,983.4	0.104
Mar-91	518.183	Nov-90	502,660.0	0.103
Apr-91	590.114	Dec-90	518,081.7	0.114
May-91	530.866	Jan-91	532,553.7	0.100
Jun-91	494.664	Feb-91	544,785.9	0.091
Jul-91	693.189	Mar-91	549,992.9	0.126
Aug-91	717.575	Apr-91	547,936.7	0.131
Sep-91	734.448	May-91	542,665.8	0.135
Oct-91	725.841	Jun-91	541,317.4	0.134
Nov-91	855.514	Jul-91	544,209.0	0.157
Dec-91	867.982	Aug-91	548,853.9	0.158
Jan-92	848.776	Sep-91	555,096.3	0.153
Feb-92	771.364	Oct-91	555,442.3	0.139
Mar-92	805.537	Nov-91	545,352.3	0.148
Apr-92	844.904	Dec-91	536,337.4	0.158
May-92	891.206	Jan-92	525,097.3	0.170
Jun-92	948.758	Feb-92	514,729.1	0.184
Jul-92	813.465	Mar-92	509,647.7	0.160
Aug-92	817.016	Apr-92	507,707.0	0.161

* Formula: net write-offs / sales revenue * 100

NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
Sep-92	826.676	May-92	509,607.6	0.162
Oct-92	762.143	Jun-92	513,989.4	0.148
Nov-92	612.077	Jul-92	513,603.2	0.119
Dec-92	622.276	Aug-92	517,353.0	0.120
Jan-93	702.575	Sep-92	524,075.0	0.134
Feb-93	707.262	Oct-92	534,921.3	0.132
Mar-93	680.255	Nov-92	548,252.9	0.124
Apr-93	579.595	Dec-92	557,950.5	0.104
May-93	604.961	Jan-93	568,430.5	0.106
Jun-93	672.327	Feb-93	577,877.7	0.116
Jul-93	675.761	Mar-93	587,405.9	0.115
Aug-93	700.562	Apr-93	598,383.1	0.117
Sep-93	711.063	May-93	610,086.0	0.117
Oct-93	831.159	Jun-93	621,144.3	0.134
Nov-93	888.730	Jul-93	635,208.3	0.140
Dec-93	914.496	Aug-93	644,449.5	0.142
Jan-94	970.763	Sep-93	650,517.8	0.149
Feb-94	998.100	Oct-93	650,993.6	0.153
Mar-94	1100.570	Nov-93	648,476.1	0.170
Apr-94	1164.631	Dec-93	645,335.1	0.180
May-94	1215.500	Jan-94	642,173.1	0.189
Jun-94	1208.761	Feb-94	639,463.4	0.189
Jul-94	1271.848	Mar-94	636,049.8	0.200
Aug-94	1294.869	Apr-94	633,361.1	0.204
Sep-94	1315.739	May-94	632,334.8	0.208
Oct-94	1350.510	Jun-94	628,844.6	0.215
Nov-94	1373.444	Jul-94	626,469.6	0.219
Dec-94	1362.635	Aug-94	628,496.6	0.217
Jan-95	1317.059	Sep-94	632,121.2	0.208
Feb-95	1290.213	Oct-94	638,031.7	0.202
Mar-95	1375.314	Nov-94	646,394.5	0.213
Apr-95	1386.843	Dec-94	650,586.4	0.213

* Formula: net write-offs / sales revenue * 100

NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
May-95	1391.396	Jan-95	656,659.3	0.212
Jun-95	1353.006	Feb-95	665,177.2	0.203
Jul-95	1244.912	Mar-95	673,327.4	0.185
Aug-95	1291.088	Apr-95	680,857.9	0.190
Sep-95	1288.917	May-95	685,856.0	0.188
Oct-95	1205.016	Jun-95	692,862.7	0.174
Nov-95	1182.277	Jul-95	698,263.4	0.169
Dec-95	1211.398	Aug-95	703,587.7	0.172
Jan-96	1216.297	Sep-95	705,837.4	0.172
Feb-96	1321.995	Oct-95	707,099.2	0.187
Mar-96	1163.745	Nov-95	708,092.9	0.164
Apr-96	1209.663	Dec-95	706,596.2	0.171
May-96	1215.723	Jan-96	713,855.6	0.170
Jun-96	1229.892	Feb-96	716,774.7	0.172
Jul-96	1431.066	Mar-96	724,647.9	0.197
Aug-96	1383.290	Apr-96	723,406.7	0.191
Sep-96	1351.144	May-96	727,926.8	0.186
Oct-96	1385.503	Jun-96	733,692.3	0.189
Nov-96	1391.768	Jul-96	741,335.9	0.188
Dec-96	1391.795	Aug-96	743,307.8	0.187
Jan-97	1431.064	Sep-96	746,939.3	0.192
Feb-97	1334.076	Oct-96	749,951.8	0.178
Mar-97	1356.690	Nov-96	755,648.7	0.180
Apr-97	1382.070	Dec-96	768,788.9	0.180
May-97	1369.514	Jan-97	770,895.0	0.178
Jun-97	1396.488	Feb-97	775,116.0	0.180
Jul-97	1259.340	Mar-97	776,386.0	0.162
Aug-97	1282.000	Apr-97	786,486.0	0.163
Sep-97	1353.000	May-97	787,313.0	0.172
Oct-97	1384.048	Jun-97	785,934.2	0.176
Nov-97	1370.725	Jul-97	783,061.5	0.175
Dec-97	1459.809	Aug-97	782,455.2	0.187
Jan-98	1436.960	Sep-97	784,851.0	0.183
Feb-98	1433.201	Oct-97	785,637.0	0.182
Mar-98	1404.239	Nov-97	781,205.0	0.180
Apr-98	1311.601	Dec-97	778,240.8	0.169

* Formula: net write-offs / sales revenue * 100

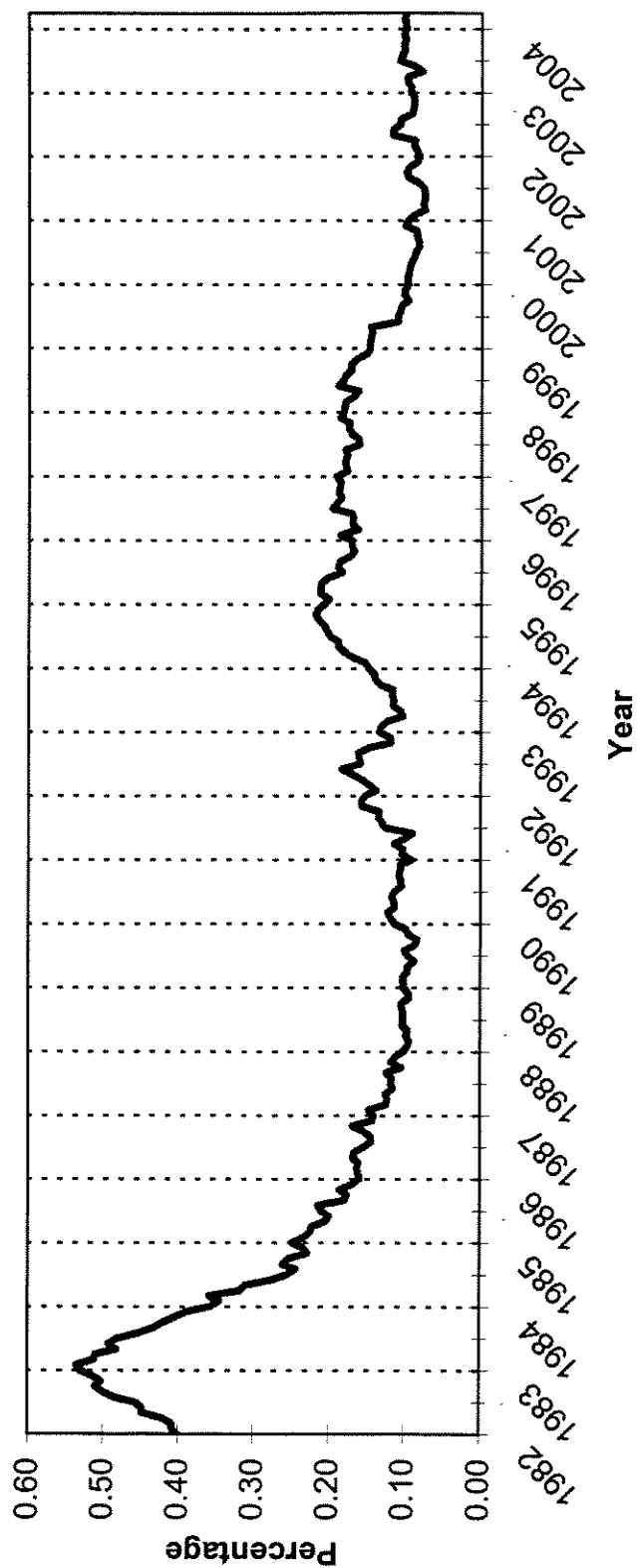
NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
May-98	1263.318	Jan-98	775,810.6	0.163
Jun-98	1468.636	Feb-98	771,004.0	0.190
Jul-98	1401.320	Mar-98	765,741.6	0.183
Aug-98	1365.270	Apr-98	756,997.4	0.180
Sep-98	1293.944	May-98	749,919.1	0.173
Oct-98	1266.397	Jun-98	743,326.5	0.170
Nov-98	1226.766	Jul-98	737,535.1	0.166
Dec-98	1111.397	Aug-98	732,908.3	0.152
Jan-99	1073.698	Sep-98	724,646.9	0.148
Feb-99	1063.191	Oct-98	716,083.7	0.148
Mar-99	1047.338	Nov-98	714,901.6	0.147
Apr-99	1028.931	Dec-98	710,814.3	0.145
May-99	1037.296	Jan-99	707,274.7	0.147
Jun-99	780.974	Feb-99	704,539.7	0.111
Jul-99	777.205	Mar-99	698,193.0	0.111
Aug-99	754.389	Apr-99	696,160.9	0.108
Sep-99	742.846	May-99	698,896.7	0.106
Oct-99	689.311	Jun-99	700,032.0	0.098
Nov-99	718.268	Jul-99	701,245.6	0.102
Dec-99	717.975	Aug-99	704,314.0	0.102
Jan-00	691.699	Sep-99	705,621.9	0.098
Feb-00	705.040	Oct-99	712,044.2	0.099
Mar-00	695.928	Nov-99	715,099.8	0.097
Apr-00	699.667	Dec-99	725,604.3	0.096
May-00	687.443	Jan-00	733,734.2	0.094
Jun-00	668.912	Feb-00	743,853.9	0.090
Jul-00	663.323	Mar-00	757,727.2	0.088
Aug-00	646.734	Apr-00	770,223.8	0.084
Sep-00	655.407	May-00	782,607.8	0.084
Oct-00	685.529	Jun-00	796,323.4	0.086
Nov-00	707.453	Jul-00	811,356.0	0.087
Dec-00	837.709	Aug-00	826,857.1	0.101
Jan-01	814.157	Sep-00	841,178.6	0.097
Feb-01	764.831	Oct-00	855,590.8	0.089
Mar-01	663.387	Nov-00	868,022.3	0.076
Apr-01	679.070	Dec-00	874,206.1	0.078
May-01	671.006	Jan-01	884,834.8	0.076

* Formula: net write-offs / sales revenue * 100

NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
Jun-01	675.657	Feb-01	891,885.5	0.076
Jul-01	686.072	Mar-01	894,649.8	0.077
Aug-01	751.423	Apr-01	897,764.7	0.084
Sep-01	869.430	May-01	898,703.6	0.097
Oct-01	902.087	Jun-01	898,830.1	0.100
Nov-01	860.511	Jul-01	900,834.8	0.096
Dec-01	774.635	Aug-01	899,953.4	0.086
Jan-02	753.661	Sep-01	904,740.1	0.083
Feb-02	769.445	Oct-01	903,460.9	0.085
Mar-02	809.180	Nov-01	898,643.3	0.090
Apr-02	790.002	Dec-01	891,698.6	0.089
May-02	1030.610	Jan-02	880,381.5	0.117
Jun-02	1018.622	Feb-02	868,466.5	0.117
Jul-02	931.019	Mar-02	859,986.8	0.108
Aug-02	912.549	Apr-02	855,493.9	0.107
Sep-02	793.242	May-02	851,635.4	0.093
Oct-02	773.313	Jun-02	852,288.1	0.091
Nov-02	766.756	Jul-02	851,115.2	0.090
Dec-02	764.393	Aug-02	848,860.0	0.090
Jan-03	792.559	Sep-02	844,623.1	0.094
Feb-03	792.473	Oct-02	845,847.8	0.094
Mar-03	831.944	Nov-02	850,081.3	0.098
Apr-03	840.975	Dec-02	858,635.7	0.098
May-03	683.004	Jan-03	869,367.4	0.079
Jun-03	795.584	Feb-03	882,400.9	0.090
Jul-03	970.816	Mar-03	899,062.1	0.108
Aug-03	952.196	Apr-03	911,131.8	0.105
Sep-03	937.554	May-03	923,370.9	0.102
Oct-03	958.486	Jun-03	933,521.6	0.103
Nov-03	951.452	Jul-03	938,160.0	0.101
Dec-03	975.434	Aug-03	945,952.4	0.103
Jan-04	955.302	Sep-03	953,462.8	0.100
Feb-04	962.704	Oct-03	956,538.5	0.101
Mar-04	974.837	Nov-03	959,694.7	0.102
Apr-04	965.425	Dec-03	960,784.2	0.100

* Formula: net write-offs / sales revenue * 100

Hawaiian Electric Company, Inc.
Uncollectibles as a Percent of Revenues



NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
Jan-95	1317.059	Sep-94	632,121.2	0.208
Feb-95	1290.213	Oct-94	638,031.7	0.202
Mar-95	1375.314	Nov-94	646,394.5	0.213
Apr-95	1386.843	Dec-94	650,586.4	0.213
May-95	1391.396	Jan-95	656,659.3	0.212
Jun-95	1353.006	Feb-95	665,177.2	0.203
Jul-95	1244.912	Mar-95	673,327.4	0.185
Aug-95	1291.088	Apr-95	680,857.9	0.190
Sep-95	1288.917	May-95	685,856.0	0.188
Oct-95	1205.016	Jun-95	692,862.7	0.174
Nov-95	1182.277	Jul-95	698,263.4	0.169
Dec-95	1211.398	Aug-95	703,587.7	0.172
Jan-96	1216.297	Sep-95	705,837.4	0.172
Feb-96	1321.995	Oct-95	707,099.2	0.187
Mar-96	1163.745	Nov-95	708,092.9	0.164
Apr-96	1209.663	Dec-95	706,596.2	0.171
May-96	1215.723	Jan-96	713,855.6	0.170
Jun-96	1229.892	Feb-96	716,774.7	0.172
Jul-96	1431.066	Mar-96	724,647.9	0.197
Aug-96	1383.290	Apr-96	723,406.7	0.191
Sep-96	1351.144	May-96	727,926.8	0.186
Oct-96	1385.503	Jun-96	733,692.3	0.189
Nov-96	1391.768	Jul-96	741,335.9	0.188
Dec-96	1391.795	Aug-96	743,307.8	0.187
Jan-97	1431.064	Sep-96	746,939.3	0.192
Feb-97	1334.076	Oct-96	749,951.8	0.178
Mar-97	1356.690	Nov-96	755,648.7	0.180
Apr-97	1382.070	Dec-96	768,788.9	0.180
May-97	1369.514	Jan-97	770,895.0	0.178
Jun-97	1396.488	Feb-97	775,116.0	0.180
Jul-97	1259.340	Mar-97	776,386.0	0.162
Aug-97	1282.000	Apr-97	786,486.0	0.163
Sep-97	1353.000	May-97	787,313.0	0.172

NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
Oct-97	1384.048	Jun-97	785,934.2	0.176
Nov-97	1370.725	Jul-97	783,061.5	0.175
Dec-97	1459.809	Aug-97	782,455.2	0.187
Jan-98	1436.960	Sep-97	784,851.0	0.183
Feb-98	1433.201	Oct-97	785,637.0	0.182
Mar-98	1404.239	Nov-97	781,205.0	0.180
Apr-98	1311.601	Dec-97	778,240.8	0.169
May-98	1263.318	Jan-98	775,810.6	0.163
Jun-98	1468.636	Feb-98	771,004.0	0.190
Jul-98	1401.320	Mar-98	765,741.6	0.183
Aug-98	1365.270	Apr-98	756,997.4	0.180
Sep-98	1293.944	May-98	749,919.1	0.173
Oct-98	1266.397	Jun-98	743,326.5	0.170
Nov-98	1226.766	Jul-98	737,535.1	0.166
Dec-98	1111.397	Aug-98	732,908.3	0.152
Jan-99	1073.698	Sep-98	724,646.9	0.148
Feb-99	1063.191	Oct-98	716,083.7	0.148
Mar-99	1047.338	Nov-98	714,901.6	0.147
Apr-99	1028.931	Dec-98	710,814.3	0.145
May-99	1037.296	Jan-99	707,274.7	0.147
Jun-99	780.974	Feb-99	704,539.7	0.111
Jul-99	777.205	Mar-99	698,193.0	0.111
Aug-99	754.389	Apr-99	696,160.9	0.108
Sep-99	742.846	May-99	698,896.7	0.106
Oct-99	689.311	Jun-99	700,032.0	0.098
Nov-99	718.268	Jul-99	701,245.6	0.102
Dec-99	717.975	Aug-99	704,314.0	0.102
Jan-00	691.699	Sep-99	705,621.9	0.098
Feb-00	705.040	Oct-99	712,044.2	0.099
Mar-00	695.928	Nov-99	715,099.8	0.097
Apr-00	699.667	Dec-99	725,604.3	0.096
May-00	687.443	Jan-00	733,734.2	0.094
Jun-00	668.912	Feb-00	743,853.9	0.090
Jul-00	663.323	Mar-00	757,727.2	0.088
Aug-00	646.734	Apr-00	770,223.8	0.084

NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
Sep-00	655.407	May-00	782,607.8	0.084
Oct-00	685.529	Jun-00	796,323.4	0.086
Nov-00	707.453	Jul-00	811,356.0	0.087
Dec-00	837.709	Aug-00	826,857.1	0.101
Jan-01	814.157	Sep-00	841,178.6	0.097
Feb-01	764.831	Oct-00	855,590.8	0.089
Mar-01	663.387	Nov-00	868,022.3	0.076
Apr-01	679.070	Dec-00	874,206.1	0.078
May-01	671.006	Jan-01	884,834.8	0.076
Jun-01	675.657	Feb-01	891,885.5	0.076
Jul-01	686.072	Mar-01	894,649.8	0.077
Aug-01	751.423	Apr-01	897,764.7	0.084
Sep-01	869.430	May-01	898,703.6	0.097
Oct-01	902.087	Jun-01	898,830.1	0.100
Nov-01	860.511	Jul-01	900,834.8	0.096
Dec-01	774.635	Aug-01	899,953.4	0.086
Jan-02	753.661	Sep-01	904,740.1	0.083
Feb-02	769.445	Oct-01	903,460.9	0.085
Mar-02	809.180	Nov-01	898,643.3	0.090
Apr-02	790.002	Dec-01	891,698.6	0.089
May-02	1030.610	Jan-02	880,381.5	0.117
Jun-02	1018.622	Feb-02	868,466.5	0.117
Jul-02	931.019	Mar-02	859,986.8	0.108
Aug-02	912.549	Apr-02	855,493.9	0.107
Sep-02	793.242	May-02	851,635.4	0.093
Oct-02	773.313	Jun-02	852,288.1	0.091
Nov-02	766.756	Jul-02	851,115.2	0.090
Dec-02	764.393	Aug-02	848,860.0	0.090
Jan-03	792.559	Sep-02	844,623.1	0.094
Feb-03	792.473	Oct-02	845,847.8	0.094
Mar-03	831.944	Nov-02	850,081.3	0.098
Apr-03	840.975	Dec-02	858,635.7	0.098
May-03	683.004	Jan-03	869,367.4	0.079
Jun-03	795.584	Feb-03	882,400.9	0.090
Jul-03	970.816	Mar-03	899,062.1	0.108

NET WRITE-OFFS		SALES REVENUES		
Mo/Yr	12 Months Ending	Mo/Yr	12 Months Ending	% Write-off *
Aug-03	952.196	Apr-03	911,131.8	0.105
Sep-03	937.554	May-03	923,370.9	0.102
Oct-03	958.486	Jun-03	933,521.6	0.103
Nov-03	951.452	Jul-03	938,160.0	0.101
Dec-03	975.434	Aug-03	945,952.4	0.103
Jan-04	955.302	Sep-03	953,462.8	0.100
Feb-04	962.704	Oct-03	956,538.5	0.101
Mar-04	974.837	Nov-03	959,694.7	0.102
Apr-04	965.425	Dec-03	960,784.2	0.100

Jan'95-Apr.'04 115933.262 88272467.490 0.131 avg.

CA-IR-682

Ref: HECO T-9, pages 19-21, and HECO response to CA-IR-75 (Uncollectibles).

The referenced testimony generally discusses HECO's experience with uncollectible accounts and points to HECO-906 for a historical comparison of uncollectibles as a percent of revenues. The referenced testimony also indicates that the local economy has not recovered as completely as expected and seems to imply that a higher uncollectible factor (0.13%) is warranted. In support, HECO-907 represents a chart of residential and commercial accounts outstanding for 60-days or more. Please provide the following information:

- a. Is the above summary accurate? If not, please clarify any material misstatements.
- b. In response to CA-IR-75, HECO provided gross write-offs, recoveries and net write-offs by month during calendar years 2000-2004, showing that gross and net write-offs in 2004 were lower than any other year. Please explain the decrease in the 2004 write-off activity, identifying and describing any changes in write-off policies, collection activities, etc. that materially contributed to this result.

HECO Response:

- a. While the above passage generally summarizes the referenced testimony, the referenced pages of the testimony speak for themselves. The residential and commercial delinquencies (over 60 days) for 2004 versus 2005 by month show the following increases:

January 2005 show a 65% increase over January 2004

February 2005 show a 27% increase over February 2004

March 2005 show a 28% increase over March 2004

April 2005 show a 38% increase over April 2004. Based on this data, we feel that the net write-offs will increase accordingly.

- b. The decrease in the 2004 write-off activity was primarily due to a drop in bankruptcies in 2004 as compared to previous years. There were no changes in write-off policies or collection activities in 2004.

CA-IR-683

Ref: HECO reponse to CA-IR-518 regarding pension expense payment lag.

Please provide the following in this regard:

- a. Please clarify for which plan year each payment date/amount provided in response to part (a) of the noted request relates to.
- b. Please clarify the response to part (b) of the noted request. The first part of the response indicates that "minimum required contribution(s) for a plan year must be made within 8-1/2 months of the last day of that plan year." The second part states "[i]n addition, minimum contribution amounts are due on quarterly basis....for a calendar plan year." How can the quarterly minimum contribution amounts be calculated when one doesn't even know what the minimum contribution will ultimately be?
- c. Referring to part (b) above, what applicability would the first noted contribution date (i.e., 8-1/2 months after the end of the plan year) have if the second noted minimum contributions already requires an earlier quarterly funding within the given calendar plan year.

HECO Response:

- a. The contributions from 6/30/03 through 9/15/04 totaling \$23,080,742 relate to the 2003 plan year, and the \$5.5 million contribution made on 12/29/04 relates to the 2004 plan year.
- b. The minimum contribution for a plan year is determined as of the first day of the plan year. Generally, the employer's payment into the plan can be delayed until 8-1/2 months after the end of the plan year. However, if the plan is not sufficiently funded, contributions are payable on a quarterly basis. If quarterly contributions are required, they are also determined as of the first day of the plan year and then must be funded at the end of each quarter. Generally, the four quarterly payments total less than the full minimum amount for the year, so any residual minimum requirement may be delayed until 8-1/2 months after the end of the plan year.
- c. See response to part b. above. As an example, if the full minimum contribution for a plan year is \$12 million and each quarterly contribution requirement is \$2 million, then the \$2

million is due at the end of each quarter and the remaining \$4 million is due no later than 8-1/2 months after the end of the plan year.

CA-IR-684

Ref: HECO responses to CA-IR-216 and CA-IR-525 regarding prepayment account.

Please provide the following:

- a. Describe the events, transactions or change in conditions causing the Prepaid rent account (16601000) balance to decline in the second half of 2004 and actually go negative in January 2005.
- b. When is the King St. property rent typically "prepaid?"
- c. Describe for what period the King St. rent is typically prepaid (i.e., quarterly in advance, monthly in advance, other)?
- d. Provide the balance associated with the prepayment of King St. property rent for each month of 2004.

HECO Response:

- a. Under the old King St. lease which expired on November 30, 2004, the King St. rent was prepaid semi-annually in advance. An advance payment was made in May 2004 for the rental payment for the period from June 1 to November 30, 2004. The monthly recognition of the rent expense decreased the Prepaid Rent Account balance in the second half of 2004.

The old King St. lease expired on November 30, 2004. HECO continues as a tenant on a month-to-month basis under terms of the old King St. lease. The Prepaid Rent Account

balance was negative in December 2004 and January 2005. The balance was negative in December 2004 and January 2005.

year, and the November payment was to cover the period from December of the current year through May of the following year. HECO currently occupies the King St. building on a month-to-month tenancy under the expired lease agreement. Payments under the month-to-month tenancy are being made monthly in advance. Under the proposed new long-term lease agreement for the King St. property, HECO will be making monthly in advance payments to Bishop Estate.

- d. The payment for the King St. property rent is reflected in the Prepaid Rent Account #16601000. See page 3 of CA-IR-216 (revised 5/6/05) for the 2004 monthly balances.

CA-IR-685

Ref: T-4.

Please provide actual monthly and annual heat rates, gross and net generation for each generating unit for the years 2001 through 2004.

HECO Response:

The actual monthly and annual values for heat rate, gross/net generation for 2001 through 2004 are provided on pages 2 to 5 to this response.

[illegible]

[illegible]

Generating Unit Statistics																
Gross KW/Hrs		H8	K1	K2	K3	K4	K5	K6	W3	W4	W5	W6	W7	W8	W9	W10
H8		24,407,000	61,186,100	471,856,000	395,224,000	416,183,000	600,929,000	802,730,000	737,850,000	23,834,800	61,171,000	98,965,300	528,616,100	491,843,300	2,417,000	2,581,000
H9		17,347,100	73,998,700	419,000,000	521,471,000	598,838,000	538,852,000	763,300,000	604,430,000	41,163,600	84,491,800	151,169,300	559,793,700	7,244,000	3,031,000	
H10		15,385,700	65,998,900	480,948,000	475,132,000	488,699,000	822,662,000	967,940,000	779,310,000	71,075,200	104,217,000	128,163,000	440,843,200	466,761,400	11,230,000	
H11		82,172,000	121,281,400	530,495,000	528,929,000	587,948,000	573,847,000	822,060,000	844,150,000	105,314,200	148,429,800	178,239,300	480,079,600	351,872,400	19,202,000	
Net KW/Hrs		H8	K1	K2	K3	K4	K5	K6	W3	W4	W5	W6	W7	W8	W9	W10
H8		20,266,900	55,661,600	445,117,900	372,824,800	395,968,900	572,751,000	752,221,000	682,609,000	20,088,600	63,794,100	92,481,200	501,857,800	466,635,300	2,089,600	2,326,930
H9		14,815,800	67,746,340	394,186,900	493,332,900	539,293,200	611,144,600	714,554,000	560,359,000	35,451,600	77,755,000	141,346,600	532,097,000	453,601,200	6,882,430	2,861,960
H10		12,306,000	60,604,960	455,205,200	448,466,400	482,270,000	498,766,800	803,284,000	724,961,000	47,194,700	98,264,600	119,153,800	417,837,800	440,761,500	10,866,850	6,172,910
H11		75,174,900	112,331,600	503,427,300	499,259,800	538,665,600	546,319,100	582,534,000	785,354,000	96,949,200	138,633,600	166,935,500	454,538,700	331,974,900	17,871,930	19,947,400
Net Heat Rate-Btu/KWH		H8	K1	K2	K3	K4	K5	K6	W3	W4	W5	W6	W7	W8	W9	W10
H8		15,628	13,688	10,279	10,191	10,133	9,804	10,172	10,217	14,863	13,233	12,048	10,023	10,124	30,489	30,263
H9		14,087	13,410	10,157	10,153	9,988	9,834	10,210	10,218	14,563	12,849	11,753	10,037	10,221	21,643	20,038
H10		16,356	12,678	10,184	10,234	10,095	9,977	10,169	10,169	13,843	13,809	12,353	10,118	10,340	20,949	20,949
H11		12,816	12,936	10,214	10,133	10,037	9,940	9,897	10,212	13,820	12,446	12,163	10,308	10,373	22,071	21,724
Values calculated from Coriolis flowmeters unless noted. W9/W10 from unit displacement flowmeter and heat content from diesel inventory.																
Sales from 1/1/01 to 4/4/03 based upon area flowmeter readings.																
W7 content for H8 from 1/1/01 to 12/31/03 estimated from station inventory.																
W8 content for H9 from 1/1/01 to 4/3/03 estimated from station inventory.																
W9 content for H10 from 1/1/01 to 4/3/03 estimated from station inventory.																
W10 content for H11 from 1/1/01 to 4/3/03 estimated from station inventory.																

CA-IR-686

Ref: Response to CA-IR-501 and CA-IR-131.

- a. HECO's response to CA-IR-501 is the input data files to P-Month Simulation Model, including the Thermal Maintenance Schedule, a data file named HE05TYM1.umd. In file HE05TYM1.umd, HECO modeled scheduled maintenance for several generating units on certain dates. HECO's response to CA-IR-131 of Test Year 2005 Planned Outage Schedule (Revision Date 01/12/04) does not show the same generating unit maintenance schedules as was provided in file HE05TYM1.umd. Please indicate if the response to CA-IR-131 or the response to CA-IR-501 is correct?
- b. If the data file HE05TYM1.umd is incorrect please provide the correct data file.

HECO Response:

- a. HECO's response to CA-IR-501 is the input data files to P-Month Simulation Model which is written in the format as required by the P-Month program. In contrast, HECO's response to CA-IR-131 regarding the Test Year 2005 Planned Outage Schedule (Revision Date 01/12/04) is a hard copy report written as a chronological schedule of the planned dates of

5 2005 1 1 14

5 = Unit 5 (i.e., W5)
2005 = Outage Begin Year
1 = Outage Begin Month
1 = Outage Begin Day
14 = Outage Duration of 14 Days (i.e., 2 weeks)

The responses are based on the exact data for the Test Year 2005 Planned Outage Schedule (Revision Date 01/12/04). The only difference is that the input files for P-Month were requested and provided. Every production simulation model has its own unique format for input files and the format shown above is the required format for P-Month's maintenance file.

- b. HECO's data file HE05TYM1.umt is correct. Refer to response in part a.

CA-IR-687

Ref: HECO response to CA-IR-337 (revised Pension & OPEB Costs).

It is unclear, from the information provided, whether the \$7,014,500 of OPEB costs set forth on revised HECO-1504 includes or excludes retiree electric discounts for purposes of quantifying the updated 2005 forecast. In order to clarify, please state whether such retiree discounts are included therein and provide additional underlying support for the updated forecast similar to HECO-1506.

HECO Response:

The updated OPEB – FAS 106 cost of \$7,014,500 was calculated according to the provisions of SFAS 106 and includes \$816,500 applicable to retiree discounts (see HECO's response to CA-IR-587, item f, filed with the Consumer Advocate and the Department of Defense on April 27, 2005). The OPEB costs for the test year is increased by \$1,302,000 to include the amortization of the regulatory asset and reduced by \$297,000 (for a total TY 2005 OPEB cost of \$8,019,500) to exclude the estimated discount in the test year for retirees, since the electric discount adjustment to the test year revenues includes the retirees (see HECO T-15, page 11). The requested support for the updated forecast is attached as page 2 to this response.

Also, as indicated in HECO's revenue requirements input updates filed on May 5, 2005 with the Consumer Advocate, Department of Defense and the Commission, HECO plans to revise its OPEB costs when its actuary updates the OPEB costs sometime in June 2005 based on January 1, 2005 demographics.

HEI FAS 106
1/1/2005 proj from 1/1/2004

6.00%	<u>Elec Disc</u>	<u>Exec Life</u>	<u>BU VEBA</u>	<u>NBU VEBA</u>	<u>401(h)</u>	<u>Total</u>
Service Cost	219,500	104,500	1,511,500	632,000	958,500	3,426,000
Interest Cost	434,000	438,000	3,628,000	1,533,000	1,678,500	7,711,500
Exp. Asset Return	1,000	0	4,949,500	465,000	1,383,000	6,798,500
Amort of Tr Oblig	127,000	343,000	1,118,000	813,000	0	2,401,000
Amort of PSC	0	0	0	0	0	0
Amort of (G)/L	37,000	0	133,500	56,000	48,000	274,500
Total	816,500	885,500	1,441,500	2,569,000	1,302,000	7,014,500

CA-IR-688

Ref: HECO response to CA-IR-615 (Rent Expense).

CA-IR-615(a) requested the revenue requirement effect of HECO's proposed capital lease treatment of the renegotiated King Street lease as compared to an operating lease. Please provide the following:

[Redacted content]

rebalancing of the capital structure to reflect that the lease is a capital lease), as shown in response to CA-IR-260 (revised 6/9/05), provided that appropriate treatment under SFAS 71 can be obtained. This was the alternate, acceptable treatment shown in the response to CA-IR-615. Revised cost of capital to reflect the capital lease with recovery based on lease payments and to reflect the start of the lease on 7/1/05 is attached on pages 4 and 5.

- b. No, HECO does not consider these scenarios to reflect “operating lease” treatment. “Operating lease” treatment would result in no lease asset and no lease obligation being reflected on HECO’s financial statements. “Operating lease” treatment would result in the lease expense being calculated on a straight-line basis over the period which lease escalations are fixed. This is based on the guidance provided in SFAS 13, “Accounting for Leases”. “Operating lease” treatment would also result in the credit rating agencies imputing debt to HECO’s financial statements.
- c. “Operating lease” treatment is not an option which can be considered for the proposed King St. lease under current accounting standards; therefore, HECO will not provide the revenue requirements based on this scenario. The terms of the proposed King St. lease would need to change in order for the lease to be deemed an operating lease.
- d. Yes, the amounts referenced in response to CA-IR-615 represent HECO’s estimate of the revenue requirements associated with the proposed King St. lease under the two scenarios.
- e. See response to (d).
 - 1. Under the old King St. lease, HECO paid for all building improvements. The test year does not include any plant additions for the King St. building, however, HECO might have incurred building improvement costs if the old lease continued. Under the proposed new lease, Bishop Estate will pay for \$9 million in building improvements,

spread over the term of the lease. Under the old King St. lease, lease rent was subject to periodic renegotiation based on whatever market conditions exist at the time. Under the proposed new lease, there is a fixed schedule of lease rent for the term of the agreement.

2. Return on investment results primarily from the need to increase equity (and decrease debt) to maintain HECO's capital structure (and financial ratios). This rebalancing is necessary because the proposed King St. lease would result in a lease obligation (debt) being recorded on HECO's balance sheet.

Please note that HECO did not present revenue requirements based on an "operating lease", however, "operating lease" treatment of any long-term commitment with minimum fixed payments will result in credit rating agencies imputing debt on HECO's balance sheet. This would result in HECO needing to reduce other debt and

increase equity in order to maintain its financial ratios. The increase in equity would result in a revenue requirement associated with net income (return on investment to shareholders).

Hawaiian Electric Company, Inc.

Composite Embedded Cost of Capital
Test Year 2005 Average
(\$ Thousands)

		(A)	(B) = (A)/Total(A)	(C)	(D) = (B)*(C)
		Capitalization			
	WP Series Reference	Amount	Percent of Total	Earnings Requirement	Weighted Earnings Requirements
Short-Term Debt	WP-2102	\$ 37,429	3.22%	3.50%	0.11%
Lease Obligation	WP-2102A	10,113	0.87%	5.75%	0.05%
Long-Term Debt	WP-2103	423,565	36.49%	6.25%	2.28%
Hybrid Securities	WP-2104	27,303	2.35%	7.55%	0.18%
Preferred Stock	WP-2105	20,476	1.76%	5.54%	0.10%
Total Capitalization	WP-2106	\$1,160,839	100.00%	9.08%	9.08%

Total Capitalization	<u>\$1,160,839</u>	<u>100.00%</u>	<u>9.08%</u>
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Estimated 2005 Test Year Composite Cost of Capital		<u>9.08%</u>
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Totals may not add exactly due to rounding.

Hawaiian Electric Company, Inc.

Lease Obligation
Test Year 2005 Average
(\$ Thousands)

WD Reference Table

Lease Obligation, beginning	CA-IR-260 p. 4	10,209 (A)
Estimated Net Change	CA-IR-260 p. 4	<u>(193)</u>
Lease Obligation, ending	CA-IR-260 p. 4	<u>\$ 10,016 (B)</u>
Test Year 2005 Average = [(A)+(B)]/2		<u>\$ 10,113 (C)</u>

Totals may not add exactly due to rounding.

Implicit Interest Rate Calculation

Total Monthly Interest for the Year	CA-IR-260 p. 4	<u>\$ 582 (D)</u>
Implicit Annual Interest Rate		5.750% (D)/(C)

CA-IR-689

Ref: HECO responses to CA-IR-616 (Rent Expense).

CA-IR-616(c) sought an explanation for HECO's use of 235-month period rather than a 240-month period for purposes of amortizing the fair market value of the King Street leased property. The response indicated that the five month difference is associated with the effective date of the lease beginning December 1, 2004, while CA-IR-260 assumed the lease would be executed on May 1, 2005. Please provide the following:

- a. Please provide a citation to and copy of all authoritative support for the cited concept (*i.e.*, using a shorter amortization period based on lease execution, rather than effective date).
- b. Please explain why HECO has not or should not have recorded accrual journal entries for lease amortization for the months of December 2004 through April 2005, instead electing to spread the same total lease costs over the shorter 235-month period.
- c. Does the Company believe that the Commission is required to adopt HECO's proposed capital lease amortization treatment for Hawaii ratemaking purposes? If so, please provide a citation to and copy of all authoritative support relied upon by the Company in reaching this

conclusion.

HECO Response:

- a. HECO currently occupies the King St. building under a provision in the lease agreement which expired on November 30, 2004 which allows HECO to continue tenancy in the building on a month-to-month basis. Although the proposed new lease agreement specifies an effective date of December 1, 2004, the lease agreement will not apply to HECO's occupancy of the building prior to the execution of the contract. HECO will not make payments under the new lease prior to execution of the contract. The lease asset will not be created until the contract is executed and the value of the lease will be from the date it is executed until termination.
- b. Although the lease refers to an effective date of December 1, 2004, it has not been executed

for the period December 2004 to April 2005. Further, HECO has yet to enter into the new lease, therefore updated assumptions of the lease transaction assume that the new lease is executed on July 1, 2005. HECO continues as a tenant on a month-to-month basis and made payments for the period December 2004 through June 2005 under the old lease.

- c. The Company believes that the proposed capital lease recovery is a valid mechanism for recovering prudently incurred costs; however, HECO will consider basing recovery on lease payments, rather than straight-line amortization of the lease asset, if appropriate treatment under SFAS 71 can be obtained. See revised responses to CA-IR-260, CA-IR-615 and DOD/HECO-IR-6-18. The Commission is not “required” to adopt a specific treatment for ratemaking. However, there can be significant negative impacts on the utility’s ability to earn the rate of return determined to be fair by the Commission, and on the way credit rating agencies and investors assess the Company, if there are substantial differences between the

CA-IR-690

Ref: Lon Okada's direct testimony pages 22 through 24.

Please provide the following regarding the American Jobs Creation Act of 2004:

- a. All internal studies and analyses undertaken to estimate its impact upon HEI/HECO's tax liability for 2005 and subsequent years.
- b. All studies, reports and other correspondence received from HEI/HECO's outside tax experts regarding the interpretations of the Act and the probable impact upon HEI/HECO's tax liability for 2005 and subsequent years.

c. The Company's best estimate, including all underlying calculations and assumptions, of the impact of the Act on the Company's tax liability for 2005 and subsequent years.

not be qualified domestic production gross receipts and provided general guidance on the allocation of expenses to be based on the concepts used under Section 861 of the IRC.

The back-of-the-envelope calculation estimated no impact to HECO's tax liability for 2004 since generation activity income was estimated to produce a net loss. See attached for a replication of the calculation.

- b. None was received, except related to the new IRC Section 409A dealing with nonqualified deferred compensation plans and the ability to defer compensation recognition to the employee participants. These changes may necessitate revisions to plan documents but have minimal impact on HEI/HECO's estimated tax liability for 2005 and subsequent.
- c. As indicated above, our best estimate of the impact of the American Jobs Creation Act of 2004 is that it will have very nominal impact to HEI/HECO's tax liability for 2005 and subsequent years. This is based on the limited guidance issued by the IRS to date and our interpretation of the allocation rules for determining qualified production activity income.

CA-IR-691 Ref: HECO-1904 & responses to CA-IR-98 & CA-IR-356 (Pension Asset).

Please provide the following:

- a. The response to CA-IR-98 increases the 12/31/04 pension asset balance on HECO-1904 from \$65.899 million to \$81.085 million. It is unclear whether HECO also intends to increase the 12/31/05 forecast balance from the \$65.899 million set forth on HECO-1904 to \$81.085 million. Please explain and provide a copy of any supporting documentation.
- b. In response to CA-IR-356, HECO provided the calculation of the average accumulated deferred income tax reserve balance (\$3.322 million) HECO included in rate base associated with the pension asset. In light of the revisions to the pension asset balances referenced in item (a) above, has the Company also revised the calculation of the average rate base amount for the related ADIT reserves? If so, please provide the revised amount, including any supporting documentation.
- c. It is unclear how the ADIT reserve reduction to rate base in the Company's original filing (\$3.322 million) was determined.
 1. Please provide additional support for the ADIT reserve offset to rate base, showing the amount of the cumulative pension timing difference multiplied by the composite income tax rate.
 2. If the cumulative pension timing difference provided in response to item (c)1 above is not equal to the \$65.899 million pension asset, please explain and reconcile any differences.

HECO Response:

- a. HECO's revised estimate for the 12/31/05 prepaid pension asset balance is \$76.669 million.

See HECO's response to CA-IR-337, page 5, which was filed with the Consumer Advocate and the Department of Defense on April 7, 2005, for the calculation.
- b. The accumulated deferred tax balance related to pension at 12/31/03 is \$21.431 million. See HECO's revised response to CA-IR-356, page 2 (Revised 5-26-05) filed with the Consumer Advocate and the Department of Defense on May 26, 2005. Attached on pages 2 and 3 of this response is the revised average accumulated deferred income tax reserve balance related to pension based on the revisions referenced in item (a) above.
- c. See pages 2 and 3 of this response.

Hawaiian Electric Company, Inc.
Deferred Taxes on Pension
(\$ in thousands)

HECO
Reference

RECORDED BALANCE - 12/31/03	21,431	HECO-WP-1705a and 1705b
Accrual	631	
Payments	<u>7,312</u>	
ACTUAL BALANCE - 12/31/04	29,374	
Accrual	(1,718)	
Payments	<u>0</u>	
ESTIMATED BALANCE - 12/31/05	27,656	
AVERAGE 2005 BALANCE	<u><u>28,515</u></u>	

NOTE: Totals may not add exactly due to rounding.

HAWAIIAN ELECTRIC CO., INC.
DEFERRED TAXES - EXCESS PENSION (#28321)

	Accrual	Payments	Total	32.8947% Deferred Fed	6.0150% Deferred State	38.9098% Deferred Total
Beginning Balance - 1/1/04				18,109,640.92	3,322,086.91	21,431,727.83
2004 addition	(1,546,921.00)	(5,500,000.00)	(7,046,921.00)	2,318,066.12	423,875.10	2,741,941.21
2004 pmt deducted in 2003 tax return		(9,686,494.00)	(9,686,494.00)	3,186,346.71	582,646.46	3,768,993.17
2003 post year end adjustment		(3,606,503.00)	(3,606,503.00)	1,186,349.67	216,932.59	1,403,282.26
Total	(1,546,921.00)	(18,792,997.00)	(20,339,918.00)	6,690,762.50	1,223,454.14	7,914,216.64
Adjustments to deferred tax						
Deficit Deferred RJE				47,589.89	-	47,589.89
Deferred tax true up				(16,974.69)	(1,913.29)	(18,887.98)
Current Year Additions				6,721,377.70	1,221,540.85	7,942,918.55 ①
Ending Balance - 12/31/04				24,831,018.62	4,543,627.76	29,374,646.38
2005 addition	4,416,000.00	-	4,416,000.00	(1,452,631.58)	(265,624.15)	(1,718,255.73)
Estimated Balance - 12/31/05				23,378,387.04	4,278,003.61	27,656,390.65

Detail of Deferred Tax on 2004 Additions:

	Accrual	Payments	Total	
Deferred Tax - Total	601,903.50	7,312,313.14	7,914,216.64	
Deficit Deferred RJE	47,589.89		47,589.89	
Deferred tax true up	(18,887.98)		(18,887.98)	
Total Deferred Taxes	630,605.41	7,312,313.14	7,942,918.55 ①	

CA-IR-692

Ref: HECO response to CA-IR-587 (Employee Service Discounts).

The referenced response generally describes the electric discount provided to employees and retirees. The response to CA-IR-587(f) indicates that the retiree discounts are included in FAS106 cost. HECO T-15, p. 11, indicates that the Company eliminated the retiree FAS106 costs to avoid duplicating the retiree electric discount already recognized in the form of lower revenues. Please confirm that HECO does not record an expense accrual associated with the electric discount provided to active employees, as the discount is already recognized in operating results via reduced revenues. If this cannot be confirmed, please explain and quantify the amount of any expenses included in the 2005 test year forecast.

HECO Response:

HECO does not record an expense accrual associated with the electric discount provided to active employees. Electric revenues are recorded net of electric discounts.